

AMERICAN JOURNAL OF EDUCATION

UNIVERSAL EDUCATION
THE SAFETY OF A REPUBLIC

VOL. XXVIII

ST. LOUIS, MISSOURI, JANUARY 9, 1895.

No. 1.

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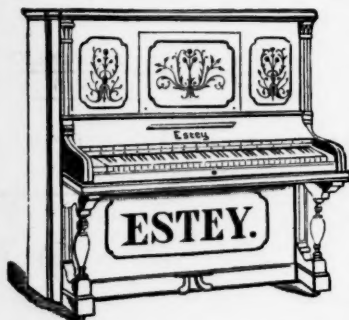
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ST. LOUIS, MISSOURI, JANUARY 9, 1895.

No. 1.



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J. B. MERWIN, St. Louis, Editor.

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THE AMERICAN JOURNAL OF EDUCATION appears at the beginning of this, its 28th year, in an entirely new and highly improved dress and form, which it hopes may give increased pleasure to its friends and patrons. It is the object of the management to so improve it, both from a literary and an artistic standpoint, that its old friends will be still more endeared to it, and that new ones will be made everywhere. Neither pains nor expense will be spared throughout the coming year to make its monthly visits really helpful to the teachers. Writers of great merit will contribute regularly a bright array of varied literary and educational matter which cannot fail to please. Our new form will give us a better opportunity for illustration, which we shall improve, and our general tone will be constantly raised to meet the exigencies of the hour. We begin the year 1895 with a largely increased list of subscribers, and with bright hopes for the future.

INTELLIGENCE never takes repose. It repairs and reproduces itself unceasingly. Each session of the school, like each season, has its own work to prepare for the next step in advance.

WE ought not to confide our children to mere pedants in this seed-time of their life who are too small to look beyond the boundaries of their own school-district. Life and study is something more and larger than this. Let us get teachers who grow and who know this, and when we are so fortunate as to secure such wisdom, let us hold on to it and compensate so as to retain in the school.

ALL schools, from the elementary to the professional, are fitting for life, and if they keep the true end in view, all teachers should instruct the young creatures intrusted to their charge how they may best be happy, and how they may best serve their fellowmen.—Pres Eliot.

INTELLIGENCE, knowledge, truth, such as our common schools establish, are always fertile, and the young as well as the old grow in hope and faith in order to accomplish good on every side. They are victory organized.

If an intelligent person were called upon to perform an autopsy on either one or both of the so-called "great" political parties, he would be able to show with how many disorders its poor system was shattered by ignorance.

TRUTH should be spoken to friends still more than to enemies, for those who court popularity at any rate are cowards or demagogues.

HIGHER IDEALS.

Spirits are not finely touched,
But to fine issues. —Shak.

THE *Public School Journal* strikes ten in its advice to the newly-elected county superintendents of Illinois in regard to the management of county institutes. The *Journal* says: "It is within the power of every superintendent in the State to secure at least one institute worker who will be a real inspiration to his teachers. An ounce of genuine inspiration is, just now, worth a pound of scholastic drill to every teacher in the State.

"What the teaching force wants is *higher ideals* and the enthusiasm which they engender. These reveal to them the necessity of more scholarship. Let them become possessed of a great idea, and they will never rest until they have done their best to realize it. It is the worthy purpose, clearly discerned, that is better than goad or lash to stimulate achievement. The teacher who cannot be inspired by a high ideal, and will not spend and be spent to realize it, is not the teacher that the institute can help. He is of the earth earthy, and it is only a question of time when he will be crowded out of the business of teaching into a more 'earthy' vocation.

"The teachers that are capable of such inspiration and are hungering for it are legion. It is the fault of the leaders that they ask for bread and receive a stone.

"They may not ask, consciously, for the consciousness has never been awakened; but they are ready to respond when the stimulus is applied.

"Let the teachers of the country become inspired by a high ideal of what it is practical for the school to do for the children, and let the superintendents catch the inspiration also, and study to help and not to trammel the teachers in the

attainment of their ends, and the educational millennium will be ushered in.

"High ideals are even more contagious than low ones. Mr. Ingersoll is reported to have said, upon a time, that he could improve the present order of nature by 'making health catching, instead of disease.' Our contention is that health, physical and spiritual, is 'catching.' The high and noble is more attractive to the human soul than the low and base.

"Crowd the institute with noble ideals of teaching and then show the way to their practical attainment. It is thus that it will be made a source of *inspiration* and *guidance* to the teachers. To do this, inspiring instructors must be employed. They are not numerous, but they can be found. Let the county superintendents of Illinois begin early to secure the services of such people."

All this is as good and as applicable to every other State as to Illinois.

ANOTHER SONG.

Break off thy song,
And haste thee quick, away.

—Shak.

WE wonder if Bro. Winship, who sings such heroic and deserved pæans of praise to "glorious old Ohio," in a late issue of the *New England Journal of Education*, noticed the usual and continued lugubrious plaint of the *New York School Journal* on "Ohio, New York and the other forty-four States?"

The *New York School Journal* of Dec. 1, says:

"The Ohio State Association met at Delaware June 26, 27, 28, and 29, *sat on the same old eggs* and did no hatching, and this is a pity, for Ohio has splendid men. The trouble is the same there as in New York; the Association seems to have arrived at the conclusion that *paper reading* is the chief end of the coming together. If that As-

sociation had put the papers in the fire and set themselves to solve the problem of training the teacher, practically solving it, they would not have met in vain. What a waste of power in New York, Ohio and so on throughout the forty-four States."

Dr. Winship, in speaking of the attendance on the N. E. A. at Asbury Park, said: "Ohio, glorious old Ohio, led New Jersey by 53. Never did Ohio do so well by half, but once, and then she was not within 408 of this year. Think of it! Ohio had almost twenty times as many as Massachusetts. New York had 363, and, though a disappointment, it was the largest attendance she has ever had outside of New York State. Pennsylvania had 324, which, though a disappointment, was the largest number by 82 that she has ever had. Delaware's eight was the most that she has ever had."

New York, too, joins New Jersey, and Asbury Park, where the meetings of the N. E. A. were held, is less than two hours' ride from New York City. And yet New York State, including New York City where the *School Journal* is published, did not send as many to the last meeting of the N. E. A. as Missouri sent "Glorious old Ohio," sings Dr. Winship. "Ohio," growls the *New York School Journal* in the same issue from which we clip the extract, stating that in June last the teachers of the State "sat on the same old eggs and did no hatching."

"Ohio," growls the *New York School Journal*, "is the most destitute of any decent plan for general education of any State. It has no normal schools supported by the State; if the teachers want training they pay for it; if the teachers want institutes they pay for them. The only reason why Ohio keeps step at all is (1) the teachers have conscience enough to attend such noble schools as Lebanon and Ada furnish, the former bankrupting it-

self to do good work and by their earnest efforts for self-improvement; (2) teachers from other States coming to it, and (3) because other States move so very slow—that a State without a system cannot keep up with States with a system is because their systems are run by politics!"

A PROCESS OF ADJUSTMENT.

DR. HARRIS, in closing his admirable address at Richmond on the course of study in secondary schools, with especial reference to the "report of the Committee of Ten," said, partly by way of comment on that important report, and partly in the way of presenting his own solution of some of the problems to which it is addressed, that "there has been a *process of adjustment* going on in higher education in several directions, especially since 1870. First, an elevation of the standard of admission took place, chiefly brought about by the action of Harvard College. Secondly, an extension of the scope of *elective studies*, as a consequence of the raised standard which now brought the freshmen class nearly up to where the junior class had been. Thirdly, the requirements for admission began to be more varied and to require something of English literature and a modern language, with some natural science and history; but much more Latin and Greek.

"Had the Latin and Greek requirements remained the same, the new standard of admission would have fitted the course of study of the public high school, and the problem would have been solved. As it is now the situation of the high school as a feeder for the college is worse than before 1870. Then the classical requirements for graduation at the high school would admit the students to college, while the collateral branches of history, science and English literature that he had begun in the high school

gave him greater apperceptive power, or greater ability to grasp the practical application of what he had learned.

"Is it not a mistake that higher education has made in trying to lengthen the school life of youth by increasing the length of the secondary school course? Is it not far better to take the student into college at sixteen or eighteen years of age and after the course of study that leads him to see the unity of human learning, take him into a post graduate course that teaches him how to specialize and pursue lines of original investigation in the laboratory or seminary?

"This radical question is now in a fair way to be answered rationally; for this report of the Committee of Ten will lead to such investigations of the educational value of secondary branches and methods of instruction as will put us in possession of accurate knowledge in regard to the nature and limits of elementary, secondary and higher education. We shall learn the fitting age for each, and not as heretofore esteem it an advantage to hold back the pupil as long as possible in the elementary and secondary courses under plea of securing greater thoroughness. We shall understand that the elementary methods are of necessity too mechanical to be used to advantage beyond the fourteenth year, while the secondary methods consist too much of copying styles and classic forms, in aping modes of work and habits of thinking, to be continued to advantage beyond the eighteenth year. We shall know better than we do now what is fitting for each age and period. With this we shall enter on a new and more scientific epoch of educational theory and practice."

NATURE gives no man knowledge, we can impart only what we know. How vastly important it is that we employ *competent* teachers in our schools.

REMARKABLE FIGURES.

These penciled figures are
Even such as they give out.

—Shak.

WE are indebted to a late issue of the New England *Journal of Education*, not only for the following figures, but for the plain statement that "these are *remarkable figures* and must be universally respected."

These remarkable figures relate to the *numbers* in attendance on the meetings of "The National Educational Association."

The total number in attendance in 1884 was 5,923. Of this number 3,356 are credited to the North Central States.

The *Journal* states the fact that "Nothing is *plainer* than that the great body of those in attendance are from the great States of Missouri, Illinois, Ohio, Indiana, Michigan, Wisconsin, Iowa, Minnesota, Nebraska and Kansas. Their totals in the last ten years have been, respectively, 2,980, 1,371, 5,103, 1,257, 2,052, 2,843, 2,066, 2,149, 1,375, 2,156. These are remarkable figures, and must be universally respected. It is not accidental that these figures roll up so heavily from these States every time. All honor to the States that cluster in the commercial heart of the country! They are educationally as grand as they are agriculturally and commercially."

We are glad to have the work done, and the influence exerted by the *nine editions* of the AMERICAN JOURNAL OF EDUCATION, not only thus recognized, but plainly stated. This larger intelligence, for which we labor, must not only create but await a culture which shall make it organic and permanent.

Such efforts, working on a long future and for permanent, rather than for present, interests, provoke no noisy acclaim, because so few realize their great scope. It is a step forward into the untried, but not uncertain, future.

We rejoice in these tidings of victory.

Missouri would easily have led all the other States, so far as numbers are concerned at the last meeting, had it been possible for all to attend who had arranged to go. The strike on the railroads turned back about *two-thirds* of those who had planned to visit Asbury Park—a fact which seems to have escaped the notice of those who give us these “remarkable figures.”

The *New England Journal* goes on to say, however, that at the last meeting “Illinois did herself proud—871; third in the list—more than all New England, New York, and Pennsylvania combined. And there is Missouri with her 435—more than New York or Pennsylvania.

“The only States having upwards of 100 are: Ohio, 989; New Jersey, 936; Illinois, 871; Missouri, 435; New York, 363; Pennsylvania, 324; Indiana, 258; Iowa, 165; Michigan, 155; Wisconsin, 142; Kentucky, 129; Nebraska, 127; Tennessee, 125; Kansas, 111.”

To the wise teacher the earth is perforated by a million channels for the activity of himself and his pupils, and the least part of what they together learn is found in the books they study.

“No State,” says Gov. Stone in his message to the Missouri Legislature, “has done, or is doing, *more* for public education through the agencies of the common schools than ours. And I feel safe in saying that no fact in our history does more to honor the people, or to exalt the State, than this, and nothing should furnish greater cause for pleasure and pride to every patriotic Missourian.”

That is a splendid recognition of the work our 11,000 teachers are doing. No work does more to honor the people or to exalt the State.

THE NEXT MEETING.

OFFICE OF THE PRESIDENT,
COLUMBIA COLLEGE, NEW YORK.

EDITOR AMERICAN JOURNAL OF EDUCATION:—The next meeting of the National Educational Association of the United States will convene at Denver, Colo., July 5-12, 1895.

Executive Committee, 1894-5.—Nicholas Murray Butler, president, Paterson, N. J. Address, Columbia College, New York, N. Y.; Albert G. Lane, first vice-president, Chicago, Ill.; Irwin Shepard, secretary, Winona, Minn.; James M. Greenwood, treasurer, Kansas City, Mo.; N. A. Calkins, chairman of the trustees, New York, N. Y.

The state and city managers for 1895 will be as follows: Alabama, J. W. Morgan, Jr., Florence; Arizona, G. W. Cheney, Tombstone; Arkansas, F. A. Futrall, Marianna; California, George R. Kleeberger, San Jose; Colorado, R. H. Beggs, Denver; Connecticut, V. G. Curtis, New Haven; Delaware, Isaac T. Johnson, Wilmington; District of Columbia, Z. Richards, Washington; Florida, W. N. Sheats, Tallahassee; Georgia, Euler B. Smith, La Grange; Idaho, F. B. Gault, Moscow; Illinois, (to be elected by the State Teachers' Association, December 26-28, 1894.) Chicago, O. T. Bright, Englewood; Indiana, W. A. Bell, Indianapolis; Indian Territory, T. J. Parks, Tahlequah; Iowa, J. T. Merrill, Cedar Rapids; Kansas, J. N. Wilkinson, Emporia; Kentucky, W. H. Bartholomew, Louisville; Louisiana, George J. Ramsey, Clinton; Maine, M. C. Fernald, Orono; Maryland, Henry A. Wise, Baltimore; Massachusetts, Ray Greene Huling, Cambridge; Michigan, Walter S. Perry, Ann Arbor; Minnesota, D. L. Kiehle, Minneapolis; Mississippi, J. R. Preston, Jackson; Missouri, J. T. Buchanan, Kansas City; Montana, R. G. Young, Helena; Nebraska, C. G. Pearse, Beatrice; Nevada, Orris

Ring, Carson City; New Hampshire, C. C. Rounds, Plymouth; New Mexico, Hiram Hadley, Las Cruces; New York: New York City, Edward D. Farrell, 146 Grand St.; Brooklyn, A. G. Merwin, 668 Handcock St.; Long Island (except Brooklyn) W. J. Ballard, Jamaica; Eastern and Northern, Charles W. Cole, Albany; Central and Western, C. W. Bardeen, Syracuse; New Jersey, James M. Ralston, Asbury Park; North Carolina, C. B. Denson, Raleigh; North Dakota, Louis B. Avery, Mayville; Ohio: Northern, E. L. Harris, Cleveland; Southern, E. W. Coy, Cincinnati; Oklahoma T., D. R. Boyd, Norman; Oregon, E. B. McElroy, Salem; Pennsylvania: Philadelphia, Watson Cornell, 1605 N. 10th St.; Eastern, E. O. Lyte, Millersville; Western, H. W. Fisher, Pittsburg; Rhode Island, Walter B. Jacobs, Providence; South Carolina, D. B. Johnson, Columbia; South Dakota, W. H. H. Beadle, Madison; Tennessee, Frank Goodman, Nashville; Texas: Northern, Alexander Hogg, Fort Worth; Southern, Oscar H. Cooper, Galveston; Utah, J. F. Millsbaugh, Salt Lake City; Vermont, Alfred Turner, Rutland; Virginia, William F. Fox, Richmond; Washington, F. J. Barnard, Seattle; West Virginia, W. H. Anderson, Wheeling; Wisconsin, C. H. Sylvester, Stevens Point; Wyoming, William Marquerat, Laramie.

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There is no authority given to announce “Official Routes” to an extent that interferes with the legitimate business of other lines. Reduced rates are granted to the N. E. A. by all lines alike, and they must be left free to compete for business on equal terms.

Arrangements have been so far completed that it may now be stated that, as a rule, the fare to Denver and return will be the *lowest prevailing single fare*, plus \$2 for the membership fee of the N. E. A. Return tickets will be good until September 1, 1895; but no tickets will be honored for the return journey unless endorsed by the Treasurer of the N. E. A., as well as by the joint agent, in Denver, of the railroads.

NICHOLAS MURRAY BUTLER,
President.

THE WISDOM OF THE RACE.

He hath a wisdom that doth guide his valour
To act in safety. —Shak.

IN the paper read before the Department of Superintendence at its session in Richmond, by Dr. Harris, United States Commissioner of Education, on "The Curriculum for Secondary Schools," he states clearly and at some length the difference between the education given by "the family" and the education given by the school; the education by which the child by "his own effort can master for himself *the wisdom of the race*."

Of course it was in the discussion of "the report of the Committee of Ten," in which these statements were made, for Dr. Harris, as is well known, would like to see the whole course of study, from the elementary school up through all grades to the State University, unified, and, so far as possible and practicable, harmonious.

These discussions and statements do great good, because it is important that all teachers read what is said to be "the most important educational document ever published in the United States."

Dr. Harris said in his Richmond address that "the bulk of all education is performed by the family in all ages. The lessons in the care for the person; the conven-

tional forms of eating and drinking; behavior toward strangers and towards one's relations; the mother tongue; the stock of beliefs and such habits of scientific observation as may exist in the community; the ideals of life; the duties of a citizen; the consciousness of nationality and the sentiment of patriotism that depends on it; the elementary arts and trades such as exist within the home; all these things are learned within the family. But letters and science are usually taught, if taught at all, by a teacher set apart for the work, and his department is called the school.

THE SCHOOL

is the auxiliary institution founded for the purpose of re-enforcing the education of the four fundamental institutions of civilization. These are the family, civil society (devoted to providing for the wants of food, clothing and shelter), the State, the Church. The characteristic of the school is that it deals with the means necessary for the acquirement, preservation and communication of intelligence.

"The mastery of letters and mathematical symbols; of the technical terms used in geography, and grammar, and the sciences; the conventional meaning of the lines used on maps to indicate water, mountains, towns, latitude, longitude; and the like. The school devotes itself to instructing the pupil in these dry details of arts that are used to record systematic knowledge. These conventionalities once learned, the youth has acquired the art of intellectual self-help; he can of his own effort open the door and enter the treasure house of literature and science. Whatever his fellowmen have done and recorded he can now learn by sufficient diligence of his own.

"The difference between the part of education acquired within the family and that acquired in the school is immense, incalculable.

The family arts and trades, manners and customs, habits and beliefs, have formed a sort of close-fitting spiritual vesture, a garment of the soul always worn and expressive of the native character, not so much of the individual as of his tribe or family or community. He, the individual, had from birth been shaped into these things as by a mould—all his thinking and willing and feeling have been moulded into the form or type of humanity looked upon as the ideal by his parents and acquaintances.

"This close-fitting garment of habit has given him direction, but not self-direction or freedom. He does what he does blindly from the habit of following custom and doing as others do.

"But the school gives a different sort of training—its discipline is for the freedom of the individual. The education of the family is in use and wont, and it *trains* rather than *instructs*. Its result is unconscious habit and ungrounded prejudice or inclination. Its likes and dislikes are not grounded in reason, but are unconscious results of early training. But the school lays all its stress on producing a consciousness of the grounds and reason for things. I should not say *all* its stress; for the school does in fact lay much stress on what is called discipline—on habits of alert and critical attention, on regularity and punctuality, on self-control and politeness. But the bare mention of these elements of discipline shows that they too are of a higher order than the habits of the family, inasmuch as they all require the exertion of both will and intellect consciously in order to attain them. The discipline of the school forms a sort of conscious superstructure to the unconscious basis of habits which have been acquired in the family.

"School instruction on the other hand is given to the acquirement of techniques; the technique of

ATTENDANCE.



NEW PUBLIC SCHOOL BUILDING, HIGHLAND, ILL.

Highland citizens are proud of their new public school building. The structure is built of stone and brick and consists of basement and two floors. The main front is 76 feet 4 inches, the depth of the west side is 89 feet 6 inches and the east side 75 feet 6 inches. It is surmounted by a tower 95 feet high. The basement contains room for steam heater and coal, girls' play room and closets, boys' play room and closets, rooms for fresh and foul air, the ventilation being well high perfect. The first floor contains five class rooms, each 25 by 28 feet, all provided with wardrobes. The second floor is arranged the same as the first, has five class rooms also of the dimensions 25 by 28 feet, and a room for the superintendent 13 by 13 feet, the rooms being provided with wardrobes as those on the first floor. A hall extends through the center of the building in both stories 25 by 35 feet, and two stairways lead from the first to the second floor. A feature of the class rooms is the splendid provision for light which is secured through large bay windows from the side as well as overhead. The cost of the building complete was \$25,008.13.

The corps of teachers consists of Charles L. Dietz, superintendent; Addie Wildhaber, Elise Kuhn, Mamie Graff, Ida Tschudy, Cecilie Huber, Ida M. Holland, Clara Handrich, Emma Riniker, Hettie Todd. Most of these teachers have been retained for several years. Supt. Chas. L. Dietz is one of the county's best and progressive educators. The subject of systematic child study is receiving much attention in many parts of the country, and Supt. Dietz and the Highland schools are fully abreast of the times on this as on all other subjects.

reading and writing; of mathematics; of grammar, geography, history, literature and science in general.

"One is astonished when he reflects upon it, at first, to see how much is meant by this word *technique*. All products of human reflection are defined and preserved by words used in a technical sense. The words are taken out of their colloquial sense, which is a loose one, except when employed as slang. For slang is a spontaneous effort in popular speech to form technical terms.

"The technical or conventional use of signs and symbols enables us to write words and to record

mathematical calculations; the technical use of words enables us to express clearly and definitely the ideas and relations of all science. Outside of technique all is vague hearsay. The fancy pours into the words it hears such meanings as its feelings prompt. Instead of science there is superstition.

"The school deals with technique in this broad sense of the word. The mastery of this technique of reading, writing, arithmetic, geography, and history lifts the pupil on to a plane of freedom and self-help hitherto not known to him. He can now by his own effort master for himself *the wisdom of the race*."

WE'VE been the banner class in attendance ever since school opened this year, triumphantly exclaimed Miss Perry, during the recess leisure, when the teachers in the building had gathered in the hall for a word or two together. We have averaged 98.4-5 per cent. every week, and we should have been up to 99.5 this week if Johnny Greene hadn't sprained his ankle and couldn't get to school. His mother says he fretted himself into a fever because he had spoiled our per cent. this week. Well, I am sorry for the ankle, but I am afraid the children thought more about the loss of the banner this week, than they did of the pain of the ankle,—they have got so worked up about attendance.

The other teachers were accustomed to Miss Perry's positive manner of expression, but one of them smiled a little ruefully over the half-envious excitement she had created, and said: "I called at Mrs. Greene's this morning on my way to school, for Johnny is one of my Sunday-school scholars, and I felt anxious about him, he is such a nervous child."

"Well, how is he?" asked Miss Perry. "Will he be long away from school? I hope not."

"The doctor says the sprain is a severe one, and that he will be kept back by his restlessness over his absence from school. He is sure all the boys will blame him for spoiling their per cent. The first thing he said when I entered the room was, 'Miss Nutter, *will* they lose the banner because I can't come?' I wish you'd write him a little note to quiet his worry. He talked in his sleep about it last night and begged of

the doctor to have him taken over to school while the roll was called in the morning, and then he wouldn't be counted absent, even if he didn't stay."

"Yes, I will, certainly," said kind-hearted Miss Perry. But I do hope he won't have to stay away long."

The bell rang and the teachers dispersed.

THROUGH MAGIC SPECTACLES.

"Doctor, you must give that child a quieting powder to-night or he will make himself down sick worrying about that school. He heard the boys in the street to-day, and he began to tremble as soon as he heard them shouting. He has got it into his head that the boys won't like him any more because he spoiled their record at school."

The doctor looked up in a half-surprised, half-indignant way, and said cynically: "I wonder our schools don't try to manage the Almighty Himself," and turned away to the restless child with a kind touch and merry word that were better than medicine.

The principal of the Harwood School was a man with hobbies. He had "ideas." He was determined that *his* school should lead the city in the matter of attendance. "Children could come to school if they wanted to." He held teachers' meetings and talked "attendance." He visited the rooms, searching only for the empty seats, and asked anxiously for the "attendance," rubbing his hands with triumph at every fractional gain that led toward the dizzy height of 100 per cent. In short, he pulled the string of competition till every teacher and every child felt overstrung as if something would have to snap soon. The children came to be regarded as so many little machines to be wound up at home

every morning at a certain hour, and warranted to run till they reached the school and the attendance was taken. After that there was a lull. The nerve tension dropped. Rome was saved or lost for that day as the case might be. After that such commonplace, everyday work as the training and nurturing of these little souls, could go on unwatched. He had done *his* duty. He had given them the all-important start in the morning, and it was a pity if they couldn't take care of themselves after that.

There *is* such a thing in this world as a sense of relative values. —*Editor of Primary Education.*

Yes, there is such a thing as relative values and there is such a thing as overdoing this matter of attendance.—*R.*

WE are indebted to the Hon. Hoke Smith for a copy of the Annual Report of the Secretary of the Interior for the fiscal year ending June 30, 1894, from which we glean the following interesting items bearing upon the educational interests of the country: Dr. Wm. T. Harris, the Commissioner of Education, reports a large increase in the amount of correspondence conducted by the Bureau the past year. The inquiries for information regarding the statistics of education, sources of information as to organization of schools, the construction of buildings, methods of instruction, and management were more numerous than ever before. This was due in part to the interest stimulated by the International Congress of Education held at Chicago in the beginning of the year and to the exhibition of educational material by all nations in the Columbian Exposition.

He attributes to the Columbian Exposition the unusual interest shown in our school system by foreign governments, there being many commissions charged with the investigation of some features of our system. Some profit is ex-

pected from the friendly criticism of our schools in the reports of these commissions.

A summary of the work of the Bureau shows, among other items, 29,634 letters received, 9,887 documents, 11,652 acknowledgments by mail, 9,829 statistical returns made to the Bureau; number of books and pamphlets added to the library during the year, 9,400, over 4,000 of these being included in the "Model library," exhibited at the Columbian Exposition by the American Library Association, and presented to the Bureau of Education at its close. The total number of books in the library of the Bureau is 57,890. It is much consulted by special students in education in the several States.

A catalogue of 5,000 books, prepared by the co-operation of 75 specialists chosen from the librarians of the country, was printed and distributed. It shows the first 5,000 books that a new library ought to purchase, systematically classified and arranged.

The Bureau also published and distributed during the year 30,000 copies of the report of a national committee appointed to examine and report on the proper course of study in secondary schools and academies. Besides these seven circulars of information were printed and distributed.

The Bureau also took charge of the work of examining the returns from the colleges giving instruction in agriculture and the mechanic arts, and upon the results of this examination the Secretary of the Interior certified to the Secretary of the Treasury, in accordance with the law, the several States and Territories entitled to the sum of \$20,000 each, the same being the installment for the year ending June 30, 1895.

The comparative statistics of the public schools of the United States showing the number of pupils, teachers, and the amount of expenditures for the four years including 1890, 1891, 1892, and 1893, will convey some idea of the magnitude of this interest and of its rate of growth:

Year.	Pupils enrolled.	Teachers.		Total expenditures
		Male.	Female	
1880-'90..	12,722,581	125,525	238,397	\$140,706,715
1890-'91..	13,018,282	123,287	245,008	148,738,251
1891-'92..	13,203,786	121,551	252,653	153,982,942
1892-'93..	13,442,008	121,717	258,901	163,359,016

St. Louis Notes.

ST. LOUIS SOCIETY OF PEDAGOGY.

Summary of Work Done in December, 1894.

DURING the month of December, 1894, the sections of the society continued their work with most encouraging results. Supt. E. H. Long and the Psychology Section continued the thorough study of Mr. W. T. Harris' admirable "Introduction to Philosophy," which was published in the first volume of the *Journal of Speculative Philosophy*. Mr. W. M. Bryant and the Ethics Section were occupied in a discussion of Greek Ethics in its scientific aspect, especially as developed in the work of Socrates, Plato and Aristotle. Mr. Geo. W. Krall continued his good work with the Science Section in showing teachers how they could bring their pupils into a closer acquaintance with nature at first hand. Miss A. C. Fruchte and Mr. Wm. Schuyler in the Art Sections carried on their work still further in the Italian Renaissance. Miss Fruchte treating the "Last Supper in Art" and the "Ideal of Motherhood" as expressed in ancient and modern Art, while Mr. Schuyler treated the conditions of Art in the age of the Despots and under the Popes. A fuller account of the sections of Pedagogy, Science and History is given below.

SECTION I. PEDAGOGY.

Leader, F. E. COOK.

This large section now embraces in its regular membership representatives from forty schools.

At the first meeting the subject of "The Inaugurative Stage of Consciousness" was treated by the leader, Mr. F. E. Cook, in substance, as follows:

Repeated sense, perceptions of the same object, finally result in the formation of a typical or generalized image which may be compared

with the object from which it was derived; or changed, at will, by the creative imagination; or recalled and held in the mind by means of some arbitrary or conventional sign, giving rise to that mode of mind called memory, and marking the point where, in the development of consciousness, the thinking or logical stage begins.

This free and unlimited power of the creative imagination to mould and modify its image conceptions, and to fill an ideal world with them, signifies, when truly understood, not caprice, but rather the reaction of independent mind against the bondage of inflexible sense perception, thus unfolding the ascent of expanding mind into formative or constructive power. This is realized in two ways: First, by acquiring the power to find the typical one under the many, or unity under variety; and, second, the power to specialize this typical or general idea into manifold and varied forms of its expression.

The highest agency that education may have, in the formation of this most important power, is art, as literature, especially in the form of poetry, which, through the presentation of typical classic ideals, tends to purify the ethical and æsthetic taste.

The lecturer next indicated a suitable course of reading for the young and for the youth, reaching from the nursery rhyme through the various phases of epic and dramatic poetry, the standard fairy tale and romance, the novel, the autobiography, biography, history, travels, up to the great classic thinkers of the race.

He held that those works were best adapted to the growing individual which have been produced by the race and by nations in corresponding stages of their growth.

He presented a select and quite extensive graded list of books for the use of teachers, among which may be noted Charles Lamb's

"Adventures of Ulysses," Church's "Translations of the Iliad and Odyssey," Miss Pollard's "The Bible and its Story," Lamb's "Tales From Shakespeare," as introductory to the study of the great poet, and in this latter connection, calling attention to Aristotle's definition of the purpose of the tragedy, namely: "To purify the emotions through fear and pity."

In the study of philosophy Mr. Cook commended the original work rather than so-called paraphrases and explanations which rarely help and generally confuse the student.

At the second meeting the leader traced out the transition from the imaginative to the logical or thinking stage, which is marked by the changing of semblance symbols into conventional words and signs, brought about by the attention being withdrawn from the former and concentrated more and more upon the concepts represented by the latter.

He concluded by making a distinction between memory (the recalling of a type) and recollection (the recalling of a particular precept).

The logical or thinking epoch of consciousness is to be the subject before this section in January.

SECTION V. HISTORY.

Leader, GEO. E. SEYMOUR.

The progress of civilization as manifested in history was discussed by Geo. E. Seymour, in this section, the lectures being a continuation of lines of thought pursued on former occasions.

Formerly the function of history seemed to be to give a knowledge of the rise and fall of dynasties. Now, historical studies serve a more vital and important end, that of dealing with the great factors in the progress of the race, and showing their relation and intimation in working out those subtle products which manifest them-

selves in the intellectual and moral character of a people as well as their industrial and social habits.

We have seen a steady progress away from an individualism of an essentially barbarious character in which might was confounded with right, and a steady progress in the direction of absolute authority on the part of the state, an authority whose function was to hold in restraint these barbarious tendencies of the individual until the general advance in the field of intellect could serve as a moral guide in questions of right and wrong. Moral distinctions did not rest on intelligent moral considerations, but on considerations of a prudential nature. In the realm of intellect alone moral distinctions and moral action come to find a rational basis and a guarantee of good conduct. Brute force, under restraint, came to reflect, and, reflection led to intelligent moral action, and continued moral action, to the moral habit. Thus the second great historic movement was made possible, that of reaction away from absolute authority and in the direction of a rational individualism, a social and political condition in which the sense of right in the community becomes the educator of the sense of right in the individual. Thus the idea of right in the community, reinforced by the might in the community, deals with those few whose tardy intelligence has kept them behind and below the general average of moral action of their age. The history of the Tudor Dynasty illustrates the directions and the strength of these two movements; the culmination of the first in the reign of Henry VIII, and the reaction which set in immediately after his death in 1547. No rulers knew better than the Tudors the importance of dealing with the people under the forms of law. The most arbitrary policy under legal forms finds little opposition until oppression becomes

unendurable, and even then the people hesitate to confront law with violence. The Tudor policy was all formulated on this principle. The Statute of Liveries under Henry VII was a source of oppressive revenue. He could enjoy the hospitality of a baron and then fine him for violation of the statute in making the entertainment magnificent by means of his numerous liveried retainers. Fifty thousand dollars was the price of the breach of the law. The fidelity of Empson and Dudley in their vigorous enforcement of the revenue laws cost them their heads. The most flagrant violation of our sense of justice was justified by its conformity to legal enactment. The sense of legality rose supreme over the sense of right during the 118 years of the dynasty. Legal forms were tangible and obvious. The sense of right uncertain and unreliable. The struggle to preserve his crown against the machination of Limuel and Warbeck was constant, and, for a time, doubtful. The infamy of Richard III had made these conspiracies possible, and he consumed a large part of Henry's reign.

The policy of Henry VIII was to gather into his hands all the lines of authority in church and State, and choose instruments and measures well calculated to secure his ends. He used men and means without scruple and then sacrificed Woolsey, More and Cromwell on some technicality. Woolsey was a victim under the statute of praemunire which he had violated for years with Henry's knowledge. The divorce of Catharine precipitated a quarrel which sent him to his grave. More could subscribe to the Act of Supremacy but not to its implications, and an execution for treason was his reward. Cromwell had made Henry supreme in Church as Woolsey had made him supreme in State, but his offense in the case of Anne of

Cleves sent him to the block. Of Henry's six wives Ione Seymour and Catharine Parr died natural deaths. Anne Boelyn and Catharine Howard were executed. Catharine of Aragon and Anne of Cleves were divorced. The last of the six was too smart for her lord, she outlived him. Henry had planned to have even her executed for heresy. The crowning act of this reign consisted in bequeathing the realm to Edward VI, Mary Tudor and Elizabeth in succession, under a statute giving validity to such a bequest.

SECTION VI. SCIENCE.

Leader, G. W. KRALL.

Nature study was continued through the December meetings. At the first meeting the leader gave a discussion on the modes of locomotion in animal life.

He said the capacity of motion in animals is vested in prolapsm, cilia and muscles. The amoeba is the lowest and simplest of animals, a microscopic animalcule, like a drop of jelly, possessing only protoplasmic motion. The whole body contracts, or changes shape, and any part of its body may be protruded as a false foot or pseudopod. Any part of the surface of its body may be indented for a month. In the white blood corpuscles of man we find the same protoplasmic action. Cilia are hair-like appendages by which infusoria, a higher class of microscopic animals, move about in liquids. We find these cilia in the air passages in the respiratory organs of man.

Muscles afford the best and highest means of motion and locomotion. Muscles are usually white in cold-blooded animals, and red in warm-blooded animals. The red meat of the butcher shop is muscular tissue. Insects have their muscles inside their skeletons, but in mammals the muscles are prominent and are used like ropes, chains or cords attached to and

acting on the bones as supports and levers.

Diagrams were presented to illustrate the different forms of locomotion in man and the horse. Very ingenious contrivances have been invented to record the movements of the feet in walking, running, trotting, galloping. It is almost impossible to study the movements of a horse's feet by the unaided eye. Instantaneous photographs have taught us much, and recording instruments have confirmed and explained the photographic views.

It is very interesting to watch a fly walk. Insects have six legs, and the first and third legs on one side move with the second leg on the opposite side. The spider's eight legs require close watching. The peculiar motion of the cat family contrasts with the dog. The spring-like movement of the cat should be compared with the bold straight-forward movement of the horse.

The horse, cow and sheep walk on the toe-nails; the cat and the dog on the toe; and the bear and man walk on the soles of the feet.

The second meeting was devoted to a study of the locomotive organs of different animals. The leg of the horse, cow, turkey and man were compared. What is commonly called the knee of a cow or horse is really the ankle or wrist. The "drumstick" in the turkey corresponds to the "shin-bone" in man.

The typical foot has five toes, but in the evolution of animal life useless appendages gradually disappear. The evolution of the one-toed horse from a five-toed ancestor is the triumphant contribution of paleontology to biology.

The comparative study of locomotive organs makes zoology and physiology far more interesting.

The first meeting in January will be devoted to a study of metals. Children must be led to use the eyes for observation of nature all about them, and not wear the eyes out spelling out printed type.

THE ROYAL ROAD TO LEARNING.

BY PROF. WM. M. BRYANT.

[From The Dial.]

GROWTH is possible only through reasonable exercise of power. But mind, as an indivisible unit of energy, still presents in its individual character, two radically distinct modes. The one of these modes is the sensuous; the other, the reflective. In its sensuous mode, mind is appealed to by (or rather through) physical "facts," pictorial forms. In its reflective mode, mind is exercised in the discovery and estimate of the relations of "fact" to "fact," and in the tracing of such relations to the ultimate principles of which they are only special phases. No mind can be truly educated save through the constant interplay of these two thoroughly complementary modes.

With this distinction clearly in view, it is easy to see that as a rule the cry to the effect that education must be "made easy," and that the work of the schoolroom must be made "interesting," practically amounts to nothing more than a demand for endless multiplication of illustrative matter—that is, matter that appeals directly to the sensuous aspect of consciousness. It is ordinarily synonymous with the catch-phrase, "Facts first and theory after;" and this practically is much the same as "facts" always and "theory" never. Though what a "fact" is, apart from a theory, might easily prove an embarrassing question.

Nevertheless, natural science teaching, with its brilliant experiments and its astonishing array of specimens, has led irresistibly in the direction of multiplying "illustrations," until too often that which was to be illustrated has been fairly lost from view. And the work has proved so intensely "interesting" that the conspic-

uously "successful" teacher has for the most part gone victoriously forward with the absolutely innocent assurance that he has at last actually discovered the true royal road in which learning is once for all made easy, and that all painful struggle in the educational field must henceforth prove an inexcusable anachronism. How far this brilliant superficiality has extended, few seem as yet to be clearly aware. In truth, the whole educational world is to-day dealing largely in "watered stock," and the next generation must inevitably pay the penalty in serious "shrinkage of values."

Nor is this by any means confined to work done in the natural sciences. So convincingly brilliant have been the results in this field that the now rapidly reviving interest in the science of mind, both on the side of Psychology and on the side of ethics, seems destined, for awhile at least, to come under the same spell. Nerve-ends, nerve-fibre, ganglia, white matter and gray matter, cerebral convolutions, mapping the cerebral cortex—how nearly *tangible* the mind is becoming! Shall we not be able presently to photograph an emotion, to catch the color of a thought, to touch a motive with the tips of our fingers? How much more real the "mind" would seem to "us" if only "we" could roll "it" about on the palm of "our" hand! And then there is hypnotism—wonderful, splendidly mysterious hypnotism! Why, we are just awaking to the really "interesting" aspects of the science of mind! And "interesting" all this unquestionably is—interesting to consciousness in its sensuous mode first of all. It is, indeed, interesting also to consciousness in its reflective mode, because mind requires a form through which to express itself, through which to unfold itself. Nevertheless, interesting though this psychological aspect of physiology may be, important though it may be that the student of psychology should note the

special parts of the one whole organ through which the one whole mind gives expression to the various phases of its one continuous whole activity—interesting and important though all this may be in its place, even to the reflective aspect of consciousness, it is still a fatal mistake to suppose it to constitute psychology in any proper sense of the term. Physiological psychology? Strange combination of terms! No nerve-change, however subtle, can constitute any phrase of consciousness, properly speaking. At most such nerve-change is only a precondition of one or another specialized mode of consciousness.

Meanwhile, the "method of the natural sciences" is here seized upon, with more or less unreflecting zeal, as being already proven a "successful" method, and is now confidently applied to a field where it cannot but prove the more disastrous the less carefully the workers in this field note the distinction between mind as agent and body as instrument or organ. Such distinction, adequately made and maintained, necessarily implies maturity of mind in its reflective mode. With this mode imperfectly developed, it is but inevitable that the "facts" of the nervous system, so unequivocally *there* to the sensuous consciousness, should seem to constitute the whole reality of man, and that materialism should appear as furnishing the only rational account of life and "mind."

An antidote to all this is the crying need of the time. Or if not yet vocal, it must soon become vocal. We have been led widely astray by the luring phantom of a royal road to learning. No such road exists save the truly kingly road of *work*. And work, like chastisement, is *for the present* not "joyous but grievous"; though in the end it is the one way that has in it any real

promise of "eternal life." Doubtless this subordination of the sensuous aspect of consciousness, in the form of mere present enjoyment, to the reflective aspect of consciousness in the form of steadfast adherence to an infinitely out-reaching ideal purpose, is the way of "crucifying the flesh;" and that must always be something altogether frightful and even insane to the man "in his senses;" but also it must ever prove to be something necessary and desirable and wholly sane to the man "in his right reason."

Whatever may be said, then, respecting my "Syllabus of Ethics,"—that will live if it deserves to live, and die if it deserves to die, whatever friendly or unfriendly critics may say of it—I still insist that for the purposes of the classroom the first requisite for a text-book is, not that it shall be "interesting" to or easily manageable by the student, but that it shall present in as concise and rigidly logical form as possible a *really adequate* outline of the subject. It is an utter prostitution of educational appliances to turn the school into an information-mill or a variety-show. The true school is a medium—the most efficient of all media—for the awakening of youth to a clear, adequate, genuinely *reflective* consciousness of the fundamental principles constituting the inner substance of the world, both as mind and as "matter." It is for the living teacher to stimulate the pupil to such living interest in the theme that he comes to comprehend experimental and text-book alike in their proper significance as mere instruments devised solely for his own self-development.

And, after all, precise technical language, so far from being the language of obscurity, is just that medium which realizes the very perfection of clearness. It is simply the exact form of exact thought,

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and there is in it nothing dreadful—certainly nothing more so for ethics than for, say, chemistry or electricity. Neither is it less indispensable in the one science than in the other. And if ethics is really to be taken seriously—as seriously, for instance, as biology—then whatever of technical language is necessary to the full and clear expression of the complex thought involved must frankly be faced and mastered. Education, let us repeat, is not merely, nor even chiefly, a matter of pleasure. It is, above all, a process of self-realization. Hence, what precisely the character of the education is to be is in sober truth a matter of mental, of spiritual, life and death. When dilettantism shall have once gained permanent possession of the school-room, the end of the world will be near at hand.

ST. LOUIS, OCT. 18, 1894.

INTELLIGENCE charges all the branches of the social tree with sap, with foliage, with flowers and with fruit. You see our schools are worth all, and more than they cost.



THE USES OF AN EDUCATION.

BY

FRED'K. A. FREARK.

[Originally prepared by request, and read before the teachers of the public schools of Alton, Ill.]

ANY serious attempt to prepare a thirty or forty-minute paper on The Uses of an Education, would, it seems to me, be duplicated only by something like an attempt to write a sextessimo volume to be printed in "big pica," on the history of the world; or literally to drive a camel through the eye of a needle, or to force an ostrich egg into a homeopathic vial without crushing either.

Before attempting to answer the question or questions, What does an education do for its possessor? what kind of man or woman does it make out of the raw material—the untutored boy or girl? what is the nature of the finished—no, not finished; it never becomes finished; but of the finishing product? we need to look at the nature of an education itself. We need first to get satisfactory answers to the questions, what is an education? who are the educated? These, I recognize, while only side issues, are about as difficult of answer, and will involve us in discussions scarcely less lengthy than the main question from which they arise. But while they are secondary in position, they are really primary in importance, and in their relation to the original question. We cannot expect to become agreed as to the uses of an education without first becoming agreed as to what an education is.

You are all aware, of course, of the double, or better, perhaps, the

uncertain etymology of the word; that it may have been derived from the Latin word, *educere*, meaning literally to lead out, or from its less pretentious relative, *educare*, which means to bring up as a child, to rear, to nurture, to train. Without attempting to pronounce upon the respective merits of the claims of these two Latin words to the parentage of the more significant English offspring, or to say that it is the offspring of both, and that the parentage was not bisexual at all, but unisexual; and while, for at least two reasons, I am inclined to the opinion that the latter, or *educare*, is the true parent, I confess I am not sorry that the honor is contested, and that I like the influence of the other claimant upon the character and significance of the disputed child. It makes this character stronger and this significance broader; and I, for one, would not be loath to believe, were it demonstrable, that, instead of being merely nurse or guardian or pretended parent, *educere* is the true progenitor. For, while I believe that the word educate literally means to train, I concede not only but contend that, in order to be successful, this training must be attended by a wholesome amount of the leading-out process; that, in training some, certain innate but latent qualities should be led out, i. e., brought forward and developed; that, in training others, certain innate or acquired but active qualities should be led out altogether; and that, in training still others, they themselves should be led out.

But enough of this, as it is bringing us little, if any, nearer to the answer to our question, what is an education? That, while a thorough appreciation of the name by which it is called is important enough

and very interesting, is something over and above the mere name. It preceded the name in point of time, and is something for which the name was invented or arranged, and not something that was somehow discovered and arranged to suit the name. But what is that something? It would be easier to explain what it is not. In the first place, like true eloquence, true education does not consist in learning. Like true eloquence, it cannot be brought from far. Nor does it consist necessarily in a course in some high school or college, or both; and is essentially *not* represented by a high school or college diploma. In the objective state it does not exist at all. There can absolutely be no such thing as an education separate and apart from its possessor. But what it is positively is more difficult to say. Sir Francis Bacon, who, according to some critics, said about everything that was worth saying, disposes of the matter summarily by calling it custom, or, which is the same thing, by saying that custom was education. But if this were accepted, at least without considerable modification, everybody, without exception, who had contracted habits, good or bad—and, by the by, the majority of the contracted habits are usually bad—would be educated, a thing which, according to our present conceptions, at least, we would be very loath to concede.

It is really practically impossible to draw the lines definitely; to say just what an education is or who the educated are. According to some it is simply the possession of an array of facts more or less extensive. According to others, it is simply the result of a course of so-called mental gymnastics, more or less rigid and exacting. According to still others, and this notion seems

to be increasing in popularity, it is simply a course in physical gymnastics and field athletics, unfortunately attended latterly by more or less of deliberate violence and break-bone brutality. Strictly speaking, it is neither of these, but all of them together, and each of about equal importance. The physical gymnastics and field athletics are important in order to realize the truth of the old Latin proverb and insure a sound mind in a sound body. The mental gymnastics are important because they give the mind strength, suppleness and skill. The array of facts is important, because they are the bases of mental operations, the materials with which the mind works, the plastic clay, if you please, out of which the mind moulds and shapes vessels meet for life's uses.

To the practical and successful existence of a mechanic three conditions are necessary. He must have strength; he must have skill; he must have materials. With skill and materials but without strength he is helpless. With strength and materials but without skill he can do nothing. If he have strength and skill but no materials he is as impotent to accomplish anything as his unskilled neighbor. I cannot resist the temptation of turning aside at this point to tell you a story illustrative of my meaning. On one occasion an apprentice to a smith with the best of forges and tools, heated a piece of steel and began hammering it with the purpose, he said, of making an axe. After he had heated it several times, and hammered it several times as many, he concluded that it would not make an axe, and so he resolved to make it into a mattock. When he had heated and hammered and hammered and heated it several times more, he became

convinced that it would not become a mattock, and so he determined to make one more trial, and this time resolved to make it into a shovel for a plow. The same operations of heating and hammering and hammering and heating were repeated as before, until at last, becoming weary both of heating and hammering, he plunged the hot but cooling steel into the tub of water that always stands beside the anvil, and what do you suppose he had made? A fizzle. That was all. He had the strength and the best of ways and means and materials, but not the skill. His master, with all his skill, but without the materials, could not have made even so much as a fizzle.

In like manner three conditions are essential to a practical and successful education; a sound body, a sound, developed and active mind, and a comparatively extensive array of properly classified historical, philosophical and scientific facts. This, to my mind, is a complete education, in so far as an education can be said to be complete. Here is strength to think; here is skill to think; here are things to think about. And just in proportion as we have thought, think, and keep on thinking, are we educated. Of course such conditions admit of considerable variation both in character and degree. Every sound body does not need to be sound like every other sound body. Every developed mind does not need to be developed in the same manner or to the same degree with every other mind. Every array of facts does not need to correspond either in value, extent or classification, with every other array of facts. These things may be as different as the dispositions and personal peculiarities of their possessors. As



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a result, one may not be so well educated as another; but each is equally truly educated. The difference is not in kind, but only in degree. This education is not, as many suppose, always and exclusively obtained in the schools. The fact that so many have become educated in this sense without ever seeing a high school or college is sufficient to disabuse one of this notion. The schools are the natural and best places, however, for its attainment, and ordinarily the education that I have described is to be considered identical with the so-called high school or college education in its best sense.

Who the educated are is still more difficult to say, the trouble being that those who attend the high schools and colleges do not always secure the high school or college education. We, of course, along with those who are similarly or better situated, are educated. We have had, or rather taken, and improved the advantages of the school or college or both; have secured the corresponding education; and are still more positively than ever engaged in educational work. But what of those who have not had these ad-

vantages; whose bodies and minds have not been systematically developed; who have not become acquainted with or classified an array of facts, philosophical, historical or scientific, and who are now engaged in other than educational pursuits? Are they uneducated? The great majority are, to be sure, but not all. Charlemagne, it has been said, could not write his own name. Mary, the mother of Washington, could not spell. And the illustrious Shakespeare, we have been only recently told, could not write at all, and could not, therefore, have been the author of his matchless plays. But what follows? not that Charlemagne, or the mother of Washington, or the Bard of Avon were uneducated, nor that modern methods are superfluous; but that there are more ways to become educated than one, and that there are more kinds than one of education. To establish, govern and Christianize empires is not the work of an ignoramus even although he be a royal one. To mould and shape a character like that of our country's illustrious father requires more than native simplicity. And to write the dramas of Shakespeare—well, it requires just as much genius and education as Shakespeare possessed. The mind that has been set abroad, that is really thinking, that is not content to remain in the shadow of ignorance, but struggles out of it as best it may, and keeps on struggling, though it never see a school, that mind is educating; that mind is educated.

Having thus feebly endeavored and imperfectly succeeded in setting forth my own conception of what an education is, there remains to be told what it does for its possessor.

(To be Continued.)

SKILL IN MANAGEMENT.

BY MISS MARION L. DODGE.

THIS is a broad and a very important subject to be considered by every teacher.

It brings a deep sense of the responsibility resting upon him when he considers that by his skill he may awaken so many souls to high aspirations, and stimulate them to lead useful lives; or by lack of skill, he may fail to awaken that dormant desire to emulate the good and wise, which sleeps in every soul; so far as we fail, in awakening the good, the bad is left dominant, and we may be responsible, thereby giving it a downward impulse.

It is momentous to think the destiny of a human life is trembling in the balance.

There are many mechanical methods which all teachers can and should be able to use.

It is an education in itself for a child to be taught to do things orderly, quietly, promptly, cheerfully; and it is not the least of the good results looked for among the requirements made upon the public schools.

To fix all these good habits needs patience, firmness and skill. Here, as in every department, constant watchfulness is necessary. "Eternal vigilance" is the price not only "of safety," but of the formation of good habits.

It does require much skill in the teacher to so sway the will of the child, by persuasive arguments in favor of orderly methods that he will endeavor to secure these methods; not because the teacher's will is slow, not because the superintendent has a big sprout from the apple tree behind his office door; but from a sense of the value of good habits; a desire to be obedient, or please the teacher he brings his own will to bear upon his defective habits and himself corrects them.

Here, too, the teacher must be skillful in planning the work in

such a way that there will be just as little disorder and clashing as possible.

He must give the orders of procedure so plainly that there is no room for a mistake. For illustration, last week in my school-room, I gave orders for the copybooks to be placed on the right side of the desks and for each pupil, in a back seat, to pass down the aisle and collect the row in front of him. As the books had been placed on the right side I supposed sufficient directions had been given to insure a rapid, orderly collection; and omitted to direct each one to pass down the aisle to his right. The result was a violent collision between two who attempted to occupy the same space at the same time.

Some things classified under this head are distribution of books, gathering of work, dismissal, etc. All should be done in the most orderly way. The teacher right here has a great opportunity to display his military skill in directing, ordering, and controlling his subjects.

A teacher might be able to do all this and yet fail, because he is not skillful in other ways.

A successful teacher must have skill in the use of language.

Do not think by this I mean to be able to use correct grammatical sentences. No! That is not the half, though it is of course, necessary.

But, dear teacher, have you not heard a speaker talk grammatically for two hours and the only time you felt interested was when you thought the last word was being said?

The ideal teacher must be more than a good grammarian.

He must put life and soul, heart and spirit, into his language.

He must be able to describe a city so the pupils will see it.

He must cause them to feel with the wounded soldier, to scornfully reject the British bribe with Reed

of 1775, to die with Nathan Hale, for his country's sake.

You say you have not skill? Ah, but skill is the power attained by repeated practice with a knowledge of the end to be gained.

All may gain skill in the use of language if they are willing to put into it the effort necessary.

It will certainly repay the effort tenfold in the influence gained over the pupils.

The next requirement is skill in presenting a subject to the class.

What a difference between teachers! One has by general attainment, by special study so filled his mind with the subject to be taught that he secures and holds the interest.

If one illustration fails to enlighten the mind, he has another and yet another at his command.

He watches the faces of those before him that he may know when the truth has been perceived, and is in no haste to leave the subject, knowing that the slow pupil is the one to be taught with utmost patience and with plenty of time to think.

The bright one will learn in spite of a poor teacher.

I think this is one of the most critical tests of a teacher's real skill.

He is apt to think that when the brightest ones respond to his teaching that the *subject* is taught, forgetting that it is the pupil, not the subject, that needs the teaching.

Skill requires that all possible shall be drawn out from the child, not to *tell* it what is already known, or can be developed from its present knowledge.

Telling a child instead of setting its mind to work benumbs it.

Here such an opportunity is presented to make the child feel that he knows something worth telling.

This often surprises and pleases him, and stimulates his mind to greater activity.

This, again, is the result of skill; skill in asking judicious questions that will provoke the required thought.

A suggestive question asked when the child is perplexed or when memory has failed, prevents the child from making a failure—a thing most carefully to be avoided.

In most cases the confidence of a child in his own ability needs to be developed.

The best teacher must be skillful in holding the pupil up to his best work every day.

He must make the pupil take an honest pride in progress made by a uniform endeavor to do his very best.

The sentiment, "If you do your very best, your best will better grow," should be made a stimulus toward perfect work.

The right kind of a teacher will not allow ill-written, misspelled, unpunctuated work to suffice.

With gentle, persistent firmness, he will require the work to be rewritten until the pupil has done his best, and will not be satisfied with anything less.

In government the skillful teacher is easy, quiet and firm.

He does not allow himself or his pupil to argue concerning his command.

He does not bluster or find fault; but he expects obedience, and confidently awaits it.

What he requires of the pupils he holds them to.

He provides plenty of work suited to the capacity of the pupil, makes plain what he wishes done, and lets nothing but the ability of the child limit the work.

Here is one rule this teacher finds very helpful as a means of control: "Keep the pupils busy."

This is not a new thought, for "Satan finds some mischief still for idle hands to do" is as *old* and as *true* as the hills.

He does not multiply rules. There is but one main rule which

it is possible for any pupil to break. It is, "Do right," and he gives the child opportunity to use and develop his own conscience; although at the same time he is educating its sense of right and wrong.

He tries to manage so that he appears as "harmless as a dove," while he is "wise as a serpent." With a "hand of steel in a glove of velvet," he has his way while the pupil may think he is controlling himself.

This is the perfection of good government to be attained only by the skilled.

This wise teacher awakens the child to perceive the curiosities and beauties of nature.

By means of simple science work he causes the child's ears and eyes to be open and watchful.

The child is brought to feel a love for the buds, to perceive the beautiful coloring in plants to admire the wonderful adaptation of the animal to its sphere.

In short, when a child looks upon an object, he will *see* it, and when he hears a sound he will listen with ready sense.

The skillful teacher succeeds even when circumstances are adverse and appliances poor.

I once read a story of two men hoeing. One had a sharp hoe, the other a dull one, yet they accomplished the same amount of work. A third man looking over the fence asked the one with the dull hoe how he could accomplish as much as the other. His reply came, "I have to exert more energy and skill with a poor hoe."

So the skillful worker does not depend upon surroundings nor appliances for success, but upon the very genius of labor and skill.

He creates circumstances, secures appliances, and makes the surroundings advantageous.

He brings success from poor advantages, while the unskilled worker fails with even the most favorable surroundings.

A frown or a loss of temper is unknown to the skillful teacher. If results are not favorable he finds no fault.

In a pleasant, hearty, helpful way he sets about to better them.

He reserves the condemnation and watches for the right moment when he can heartily praise effort or result. Thus his room is a happy one.

One more thought: this real teacher reaches the hearts of his pupils, and makes them feel that he is a friend, not a grave judge, convicting them of lawlessness.

They hesitate to do wrong because they know it will cause him sorrow.

With great intuitive skill, he reads in their faces the motives which prompts their actions. He sees the right intent which prompted the mistaken action (for children are often better than we think), and with kindness and patience he accepts the will for the deed.

The active sympathy for the struggling life of the children, the feeling of fellowship which causes him to put himself in their place and feel with them, gives the teacher a hold over their affections; and aids so much in bending their wills to his.

He looks not upon the dirty face, the torn jacket, the uncouth manners of the poor child except to pity, and help.

He treats all with consideration, but if he is partial in bestowing love and sympathy it is upon the neglected child.

Where others see only the exterior, he looks deeper and views the soul.

With Garfield he exclaims, "I feel like taking off my hat to every school boy, for I know not what possibilities are buttoned within his little jacket."

To thus reach the heart is the highest skill. "Not by might, not by power, but by my spirit." Yet

it is the spirit of love that softens hearts and makes them flexible.

It is such a pity that the best and noblest in life is but ideals.

The perfectly skilled teacher exists only in fancy. Yet the ideal should be a stimulus and an inspiration.

While we may not attain perfection, yet by attempting it we may be led to be more nearly perfect, and by a uniform endeavor to do our best, we may daily gain skill.

UPPER ALTON, Jan. 1, '95.

LESSONS ON COMMON THINGS.

BY THE AUTHOR OF "PRESTON PAPERS."

A GLASS OF MILK.

[NOTE: Teacher has a glass or bottle of milk, on which the cream has arisen.]

"Who can tell me what is the very best food for young children?"

"Yes, it is milk. Where do we get it?"

"At the store."

"At the milk station."

"Of the milk man."

"Of our neighbors."

"Ah, you caught me that time, for I ought to have asked *from where does it come?*"

"From cows."

"Yes, nearly all of that which we use comes from cows, although in Norway, Sweden and Denmark they commonly drink sheep's milk, which is much richer; while in some of the more mountainous countries goats' milk is used; in Arabia the people use camels' milk, and in Lapland the reindeer furnishes the milk."

[Have all these places looked up on the map].

"Now, how many of you ever heard of a *tree* which gives milk? What, none of you? In the Andes Mountains—where are they, Harry?—a tree called the cow tree gives a nourishing fluid resembling milk which is used by the natives. Who

can tell me something about the glass of milk on the table? Come up a little closer, and at first don't tell anything except what you can see. Be careful, Edith, not to crowd; that is not polite."

"It is white."

"There are two kinds in the glass."

"We can't see through it."

"Those are all good observations. There is a word that we use to describe things through which we cannot see," (writes *opaque* on the blackboard and pronounces it).

"Fred said it is white. Is it white like snow?"

"No, it is darker."

"It has a pinkish-yellow look."

"Do you know what that shows?"

"It is better than if it was clear white."

"Yes, it is really more nutritious than if bluish."

"How about the *two kinds*?"

"Oh, the top is cream."

"And why isn't the cream on the bottom or in the middle? Yes, Luella, it is lighter. Now for things that you know about milk, by tasting, or by reading, or home observation."

"It is sweet."

"It has to be strained."

"It gets sour."

"Milkmen sell it."

"Some men water their milk."

"Yes, and in some States that is punishable by fine or imprisonment. Some men who make laws are trying to see that all food which is put upon the market shall be kept pure, or as is sometimes called, *unadulterated*," (writing as before).

"It is used to feed babies with."

"And older people."

"And sick people."

"Yes, and *tired* people are learning to drink it very hot, as it helps rest them."

"It is used in cooking."

"My mamma uses a little in the dishwater instead of soap."

"And my mother uses it to clean

the paint and the oilcloth in the kitchen "

"It will take ink stains out of your apron."

"You make ice cream with it."

"And milk-shake."

"And in Southern Russia the Tartars make *koumiss* by allowing the milk to ferment, or work, so that carbonic acid gas will be formed from the sugar in the milk."

"Oh, *I know*, I read the other day that they gave President Garfield *koumiss* when he was sick; but I didn't know what it meant."

"Oh, Leonard, why didn't you look in the dictionary? I believe I will stop right here and let you see just what you can find about milk in the same blessed book, and to-morrow or some time we will have another talk on milk. What is it, Charlie?"

"Why, we make cheese of it, and feed calves, pigs and hens with it."

"Now see how much you can learn before we have another lesson about it."

SPELL AND EXPLAIN.

agaric,	farm-yard,	flavor,
curds,	casein,	creamery,
churn,	nitrogenous,	dairy,
condensed,	evaporated,	whey,
globules,	oleomargarine,	medicine,
lactic acid,	loppard,	fodder,
sterilized,	grazing,	skimmed,
butterine,	liquid,	lactose,
nutritious,	pasture,	annatto,
curdled,	temperature,	fluid,
lacteal,	albumen,	digestion.

1. Milk contains all the elements necessary to supply brain, muscles, nerves and bones with proper nourishment.

2. A pint of sweet milk contains as much nourishment as half a pound of beef.

3. What is a dairy farmer?

4. What part of our country is best for raising and feeding cattle?

5. How much milk will an ordinary cow give at one time, if properly fed and cared for?

6. Why should cows not be driven too rapidly before milking time?

7. Why must they be milked regularly? Gently? Thoroughly?

8. Name some of the best breeds of cows. Largest. Smallest. Highest priced. Hardest. Most delicate.

9. Why must they have pure water and in abundance.

10. Salt?

11. What is meant in the Bible where it speaks of a land that flows with milk and honey?

12. What is meant by "the milk of human kindness?" Milk-white? Milk-teeth? Milk sickness?

13. In what way does jolting in transportation damage milk?

14. How is that prevented?

15. Why does milk cost more in the city than in the country? (This is not always true, and furthermore, it is sometimes true that besides paying more you may have to walk a mile to get it; some dairy farmers objecting so seriously to have the butter making interrupted).

16. Which pays best, to make butter at 20 cents a pound or sell the milk at 3 cents a quart?

17. At 5 cents a quart, how much will the milk for a family of five people cost in one week, if they buy three quarts a day? In a month? A year?

18. Why is a tin pail better than a wooden one to milk in?

19. At what temperature is it best to churn milk? (Yes they do churn new milk now, instead of waiting for cream to rise and sour. Others churn the cream while sweet).

20. What is lactic acid?

21. What makes milk so easy of digestion?

22. For what purpose is lime-water sometimes used with milk?

23. What is meant by "milk-and-water" when applied to people? "Milk-sop?"

24. What effect does the food of a cow have upon her milk?

25. What is a milk "famine?"

26. What is "condensed" milk?

27. Why are your first teeth spoken of as "milk teeth?"

28. Why is milk a much better drink for anyone than tea, coffee, beer, or wine?

29. Name some forms or uses of milk not mentioned before.

30. If you have never used it as an article of food or diet, will you not try it?

31. Look under "milk" in the dictionary, for new and scientific words.

[Teachers of all grades will find suggestions for many lessons in the above, and material can be utilized for lessons in many subjects not even indicated here. Unify your work where possible, and draw as much as possible from each subject.]

QUEER QUERIES.

1. How can you take one from nineteen and still leave twenty?

2. How can you prove that seven is the half of twelve?

3. A family gathering included 1 grandfather, 1 grandmother, 2 fathers, 2 mothers, 4 children, 3 grandchildren, 1 brother, 2 sisters, 2 sons, 2 daughters, 1 father-in-law, 1 mother-in-law, and 1 daughter-in-law, and yet there were only seven persons present.

How can the two statements be reconciled?

4. What is the difference between six dozen dozen and half a dozen dozen?

5. What is the difference in capacity between twenty four quart bottles and four-and-twenty quart bottles?

6. Place three sixes together so as to make seven

7. Required, to express 100 by repetition of the same figure six times over.

8. Required, to find six times thirteen in twelve.

9. What three figures, multiplied by five, will make six?

10. How would you write in figures twelve thousand twelve hundred and twelve?

11. Five herrings were divided among five persons. Each had a herring, and yet one remained in the dish.

How was this managed?

12. Prove that two sixes make eleven.—*Mountains of Diamonds.*

ILLINOIS TEACHERS' ASSOCIATION.

THE forty-first annual meeting of the Illinois State Teachers' Association was one of the best held in recent years. How could it be otherwise with T. C. Clendennin, superintendent of schools of Cairo, as president, assisted by an able executive committee representing many, if not all, of the various departments of effort from the kindergarten up to the great Universities?

Over 800 of the leading educators of the State were enrolled. President Clendennin and his executive Committee presented a program of speakers of great strength and power, men and women who not only had something of value and interest to say, but possessed ability to say it.

Prof. Taylor C. Clendennin, of Cairo, in his inaugural address, led off on "The Central Idea" of the aims of the masses of the active cultivated educators of the State. Prof. A. S. Draper, president of the University of Illinois, delivered an address on "Science and the Elementary Schools." Pres. Nicholas Murray Butler, of the N. E. A., delivered an able address. Col. Parker, Dr. Harper, of the Chicago University; Supt. Lane, of the Chicago public schools; Dr. Krohn, of the State University; John W. Henninger, of Charleston; J. E. Bradley, of Jacksonville, D. B. Parkinson, of Carbondale, and nearly a thousand other teachers who are filling an important place and space in the world's history. They set their stamp, not alone on their pupils, but on the front of the time, as if all the unmeasurable natural resources of the State had taken on flesh and blood and had begun to write and cipher to show its majestic possibilities.

Probably the most important and far reaching action taken was the creation of a Standing Committee on State legislation of which the new State Supt., Hon. Samuel M. Inglis, is chairman, hence, what comes from this bureau of all educational intelligence will deserve a careful reading as it will to a great extent be the sense of the educators of the State. We think State Supt. Inglis has the experience, the common sense, the wisdom to see the end desired, and to find the ways and means to accomplish it.

Sustained thus with the opinions and support of the masses and events he will march to sure success and victory.

This forty-first meeting of the State Teachers' Association thus comes to be a new epoch in the history of education in Illinois.

HON. C. R. SKINNER.

I have done the State some service, and they know it. —Shak.

WE are glad to hear that the canvass of Hon. C. R. Skinner, of New York, for the position of State Superintendent of Public Instruction, promises to be successful.

Illinois and the whole West is vastly stronger in all the elements of a noble Christian citizenship by virtue of the presence of Dr. Draper in our midst. The administration of Dr. Draper in New York, in his efforts to render efficient and to perfect the educational system of the Empire State, was an unqualified success, and in achieving this distinction Deputy Superintendent Skinner was no small factor. In speaking of his able lieutenant, Supt. Draper said: "Mr. Skinner is the best deputy superintendent in this country," and he was certainly qualified as an authority to render an opinion.

Mr. Skinner has had large opportunities for the study of the best educational methods, and that he has improved these opportunities is evidenced by the fact that he has gone beyond the large expectations of his friends always in his plans and work for the schools of the State. He has shown an integrity incorruptible, and an ability that rose to the need of every position assigned him. His mind has mastered the problems involved in the education of the people. Mr. Skinner seems, also, to have a prodigious faculty of performance. He is a great worker. A good worker is very rare in these days. He is sound to the core, cheerful, persistent, competent.

Being a native of New York, we never lose our interest in these great movements which redound to her power and glory.

The leading papers of the State, too, are a unit in their expressions of opinion of the eminent fitness of Mr. Skinner for this position.

The appointment of Superintendent of Public Instruction in New York belongs to the Legislature, a majority on joint ballot being necessary to the election of the candidate.

When an opportunity knocks at your door, don't stop to ask why it is there, or it will be gone.

A GREAT MEETING.

Jocund day stands tiptoe on the misty mountain tops. —Shak.

CHAIRMAN GOVE, of the Local Executive Committee of the N. E. A. to be held in Denver in July next, authorizes the assurance that such measures will be taken by Denver and Colorado as will insure a hearty welcome to the greatest educational assembly in the world; that the excursion to the surrounding mountains and mountain parks, the comfort of the mountain hotels, the attractions and exhilaration of life at from one to three miles above the sea, the facilities for establishing study-camps and colonies in mountain resorts, will all be tendered at such reasonable prices as will enable teachers and their friends to spend their entire vacation among the mountains.

State managers are already reporting the formation of parties, and, in some cases, state headquarters have already been secured. It is advised that State managers, in conference with State officers and directors, organize at once, in their respective districts, for active work and report to Chairman Gove.

THE annual meeting of the department of superintendence of the National Educational Association will be held February 19th, 20th and 21st, in Association Hall, corner of Prospect and Erie Streets, Cleveland, Ohio. Officers: Wm. H. Maxwell, president, Brooklyn, N. Y.; O. T. Corson, first vice-president, Columbus, O.; Wm. F. Fox, second vice-president, Richmond, Va.; James L. Carlisle, secretary, Austin, Texas. Headquarters of department, Hollenden Hotel.

FIVE hundred teachers attended the Southwest Teachers' Association at Lamar last week. The next annual meeting will be held at Carthage, Christmas week of 1895.

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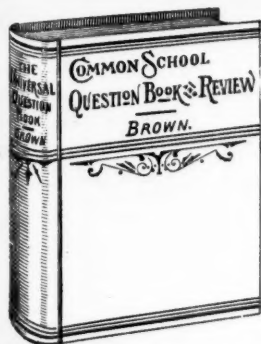


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Civil Government.

1. The United States Constitution is called the fundamental law of the land. *a* Why? *b* Whence does it derive its fundamental authority?

2. Distinguish between the terms citizen and voter.

3. It is the duty of every voter to attend the primaries of his party. Why?

4. State the age at which a citizen becomes eligible to *a* the State Legislature; *b* the United States House of Representatives; *c* the United States Senate; *d* the Presidency.

5. How does the United States Constitution provide for the appointment of foreign ministers and consuls?

6. State under what Cabinet officers the management of each of the following is placed: *a* pensions; *b* national banks; *c* postoffices and post roads; *d* war vessels.

7. *a* In making treaties with foreign powers, which of the three branches of the Government has the matter in charge? *b* What limitation is put upon the acts of this branch?

8. "The Governor shall have power to grant reprieves, communications and pardons after conviction, for all offenses, except treason and impeachments." Define the italicized words.

9. Name two appointive offices under the President, and state one duty of each.

10. The system of Civil Service controls the appointment of inferior officers under the United States. This system is intended to correct what evil?

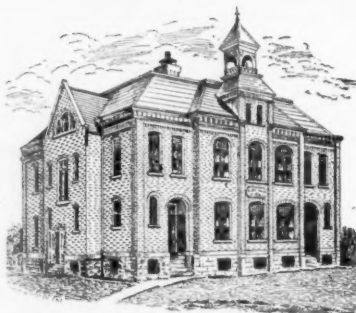
American History.

1. *a* Who commanded the expedition that first discovered Florida? *b* To what nation did he belong? *c* What was the first settlement in Florida?

2. *a* Give the name of the founder of the colony of Rhode Island. *b* What was the colony's experience with the Indians? *c* What was its attitude toward the religious belief of its inhabitants?

3. What was the cause of the early difficulties between the colonies of

TRENTON PUBLIC SCHOOL.



THE people of Trenton, Ill., a few years ago lost their fine school building by fire, but they at once commenced the erection of another and finer building. Through the kindness of Supt. J. E. Whitchurch we present this cut which is a very good view of the building. Prof. Whitchurch took charge of these schools last September and from reports in the *Trenton Sun* and other sources we know that he and his able assistants are doing excellent work.

Maryland and Virginia? *b* To what boundary line does the term "Mason and Dixon's line" refer?

4. By the treaty of peace in 1663 between England, France and Spain, what change was made in the ownership of *a* Canada; *b* Florida; *c* New Orleans and the mouth of Mississippi?

5. Locate *a* Cherry Valley; *b* Bennington; *c* Valley Forge; *d* Oriskany; *e* the Wyoming Valley; for what event in the Revolution is each place famous?

6. *a* What section of this country decidedly opposed the declaration of war in 1812? *b* In what kind of warfare were most of our victories gained in that war?

7. Concerning James Monroe, mention *a* the important fact connected with his second election; *b* the leading political contest of his administration; *c* the title given to his views concerning the acquirement of power on this continent by European nations.

8. *a* Locate Chancellorsville. *b* What was the result of the battle of Chancellorsville? *c* What southern general was by accident mortally wounded during that engagement?

9. Mention the administration in which the following events occurred: *a* The reconstruction of most of the seceding States; *b* the completion of the

Pacific railroad; *c* the resumption of specie payments.

10. *a* Name a President elected from the New England States; *b* one from the Middle States; *c* one from the Southern States, excepting Virginia.

Methods and School Economy.

1. Mention processes by the aid of which memory is strengthened.

2. Give a plan for teaching the location of the Arctic circle.

3. In subtracting 37 from 91, describe each step.

4. In going to and returning from classes and in leaving the school room children generally form in line. State two advantages of this plan.

5. What care should be exercised in the preparation of the original work for a class?

6. Name three conditions that should be taken into consideration in assigning a lesson.

7. Name three means by which a teacher may produce in the pupil a desire to acquire knowledge.

8. To what does the exclusive use of text-books tend?

9. Mention two of the chief purposes in teaching the history of one's own country.

10. What qualifications are required in a teacher that he may properly conduct a recitation?

Arithmetic.

1. The two sides of a right-angled triangle are 29 feet and 16 feet respectively. Find the length of the hypotenuse (correct to two decimal places).

$$8\frac{2}{3} \times 14\frac{1}{2} = \frac{1}{2} \div \frac{2}{7}$$

2. Simplify $84\frac{1}{2} \div 4\frac{1}{2} \times \frac{2}{3}$

3. Three families of 4, 5, and 7 persons, respectively, compose a boarding club. The total expenses of the club for the month of June were \$201.60. Find the cost per week to each family.

4. Find the total cost of 3,130 pounds of stove coal at \$5.25 per ton, and 88 pounds of cannel coal at \$6.90 per ton.

5. A pupil's standing in attendance for a term is marked 88%, and he was absent 9 days. Find the number of days of school during the term.

6. Required the cost of 18 shares of D. & H. R. R. stock at 137, brokerage $\frac{1}{8}\%$.

7. Find the proceeds of a note for \$186 given for three months, and dis-

counted at bank the day it was made at 6% per annum.

8. Find an integer that will exactly divide each of the following numbers: 494, 624, 845, and 1,001.

9. Reduce .067 *a* to a common fraction; *b* to the form of per cent.

10. Write a number that may be classified as prime, odd, concrete, integral simple, and denominate.

Geography.

1. Give, approximately, the parallel of latitude over which the sun's rays are vertical on *a* 22d of July; *b* the 22d of January.

2. The valley of the Nile is rainless except at the mouth and the source of the river. *a* What physical features make it rainless; *b* explain its productiveness in Egypt.

3. What natural causes have contributed to make England the leading manufacturing nation of the earth?

4. Name the great commercial river of *a* Scotland; *b* Austria; *c* Portugal; *d* Egypt; *e* England, and give the chief commercial city upon each.

5. *a* Name two islands off the coast of Massachusetts. *b* Locate the island of San Salvador; *c* to what company does it now belong? *d* with what historical fact is it associated?

6. What river on the boundary between *a* Iowa and Illinois; *b* Indiana and Kentucky; *c* Quebec and Ontario; *d* Oregon and Washington?

7. Where are the following capes and into what waters do they project: *a* North Cape; *b* Cape Clear; *c* Cape Cameron; *d* Guard a fui; Cape St Roque?

8. Locate the following cities and state for what each is noted: *a* Annapolis; *b* Waltham; *c* New Haven; *d* Havana; *e* Duluth.

9. *a* Name the waters that surround Manhattan Island. *b* State which of these bodies of water is spanned by the Brooklyn Bridge.

10. *a* Mention five of the principal exports of the Central American States. *b* Mention three of Portugal.

Grammar.

(1) "I say, once more, Tyndall was not merely theoretically but, practically, above (2) all things sincere; the necessity of doing, at all hazards, that which he judged, (3) rightly or wrongly, to be just and proper, was the dominant

note of his character; (4) and he was influenced by it in his manner of dealing with questions which might (5) seem to men of the world, hardly worth taking so seriously."

PROF. T. H. HUXLEY.

The first 9 questions refer to the above selection.

Classify the following clauses according to notes 1 and 2. *a* I say (line 1); *b* he judged (line 2); *c* he was influenced (line 4) *d* which might seem worth (line 4 and 5).

2. Give the predicates of the clauses of which Tyndall (line 1) and necessity (line 2), are respectively the subjects. *b* classify the clauses as above.

3. *a* Give three modifiers of *sincere* (line 2), and *b* two modifiers of *influence* (line 4).

4. Select ten adverbs.

5. Select two participles and one infinitive.

6. Re-write the clause *He was influenced by it in his manner of dealing with questions*, changing the verb to the active voice.

7. Give syntax of *a* (line 2); *b* note (line 3).

8. Give the antecedent and case of *a* which (line 2) *b* which (line 4).

9. Give the four principal parts of *a* was (line 1); *b* doing (line 2); *c* taking (line 5).

10. Write a sentence containing *a* noun used independently; *b* one containing an interjection.

Composition.

Write a composition on one of the following subjects:

1. The value of the gymnasium in modern education.

2. The influence of climate upon civilization.

3. Self-reliance as an element of character.

4. Adventures of Captain John Smith.

Physiology and Hygiene.

1. What and where is *a* the calvicle; *b* pupil; *c* trachea?

2. *a* Describe the thoracic cavity. *b* State what organs it contains.

3. *a* By what means are muscles attached to bones? *b* By what means are the bones of movable joints held together? *c* To what class of muscles does the biceps belong?

4. Name one artery in which the blood is dark; *b* two in which the blood is red.

5. State the effect on the muscles of *a* use; *b* disuse; *c* misuse.

6. Name the active principle in *a* tea; *b* coffee; *c* chocolate; *d* tobacco; *e* state which of these may be called a pronounced narcotic.

7. *a* Name the air passages to the lungs; *b* by what membrane are the walls of these passages lined? *c* Describe the arrangement of this membrane to facilitate the rapid exchanges of gases in the lungs.

8. What is the effect of alcohol upon the blood?

9. Mention the operations in which the diaphragm is especially active, aside from assisting in respiration.

10. Explain why bread thoroughly masticated tastes sweeter than bread rapidly eaten.

ANSWERS.

Civil Government.

1. *a* Because it is the basis of all legislative enactments. *b* From the people.

2. A citizen is one who is either born or naturalized in the United States. A voter is a citizen having the right of franchise.

3. In order that he may exert his influence for the selection of the best men to act as delegates to represent the principles of his party. (Other correct answers accepted.)

4. *a* Twenty-one years. *b* Twenty-five years. *c* Thirty years. *d* Thirty-five years.

5. They shall be appointed by the President and confirmed by the Senate.

6. *a* Secretary of the Interior. *b* Secretary of the Treasury. *c* Postmaster General. *d* Secretary of the Navy.

7. *a* The Executive branch. *b* The treaty must be ratified by a two-thirds vote of the Senate.

8. *a* The remitting of a penalty. *b* A formal accusation, or indictment, made by the popular branch of the Legislature against a public officer, charging him with a crime of misdemeanor.

9. Answers will differ.

10. The evil of the "spoils system."

American History.

1. *a* Ponce De Leon. *b* Spain. *c* St. Augustine.

2. *a* Roger Williams. *b* The colony had little or no trouble with the Indians. *c* There was a complete toleration of all religious beliefs.

3. A dispute over boundaries, affected, also, by religious differences. *b* The boundary line between Maryland and Pennsylvania (laid out by the surveyors, Mason and Dixon).

4. *a* From France to England. *b* From Spain to England. *c* From France to Spain.

5. *a* In Central New York; Indian massacre. *b* In southwestern Vermont; an engagement between American troops and a detachment of Burgoyne's army. *c* In southeastern Pennsylvania; winter quarters of Washington's army. (1777-8), where much suffering was experienced. *d* In Central New York, between Rome and Utica; battle between New York militia and the forces of St. Leger. *e* In eastern Pennsylvania; Indian massacre.

6. *a* New England. *b* In naval warfare.

7. He was elected without opposition, but one electoral vote being cast against him. *b* The contest over the admission of Missouri. *c* The Monroe doctrine.

8. *a* In eastern Virginia, between Washington and Richmond. *b* The Northern army was defeated and its advance towards Richmond checked. *c* "Stonewall" Jackson.

9. *a* Johnson's administration. *b* Grant's administration. *c* Hayes' administration.

10. *a* John Adams, John Quincy Adams, Pierce. *b* Van Buren, Buchanan, Cleveland, (Fillmore and Arthur) will be allowed). *c* Jackson, Taylor, (Johnson will be allowed).

Methods and School Economy.

1. Discrimination between important and unimportant facts; classification; repetition.

2. Answers will differ.

3. Answers will differ.

4. It secures quiet and uniformity of movements. It trains pupils to habits of order.

5. To have it correct as to matter and form. To have it within the range of the pupil's ability.

6. The capability of the class, the difficulties of the subject-matter, and the time the pupils will have for its preparation.

7. Answers will differ.

8. To the narrowing of the mind of both teacher and pupil. To meaning less memorizing.

9. To cultivate the virtue of intelligent patriotism. To teach that certain causes in government have produced certain definite results by heeding the lessons of which the country may have prosperity.

10. He should be thoroughly familiar with the subject-matter of the lesson and be skilled in imparting instruction.

Arithmetic.

1. 33.12xfeet.

2. $\frac{20}{99}$.

3. \$11.76, \$14.70, and \$20.58.

4. \$8.52.

5. 75 days.

6. \$2,468.25.

7. \$183.21.

8. 13.

9. *a* $1\frac{1}{5}$; *b* 6 $\frac{2}{3}$ %.

10. *Ex.* 47 lb.

Geography.

1. *a* About 16° north latitude. *b* About 8° south latitude.

2. *a* The prevailing winds flowing over the mountains and arid waste of Asia are deprived of their moisture before they reach the valley of Nile. *b* In the equatorial region during the rainy season the rain falls in torrents, the water rushes down the Nile, overflows its banks, and leaves a rich sediment which renders the valley very fertile and productive.

3. Dense population and small agricultural territory, extensive water front with good harbors, vast deposits of iron and coal and other minerals, mild climate and fertile soil.

4. *a* The Clyde, Glasgow. *b* Danube, Vienna. *c* Tagus, Lisbon. *d* Nile, Alexandria. *e* Mersey, Liverpool.

5. *a* Nantucket and Martha's Vineyard. *b* Southeast of Florida, in the Bahama Group. *c* To England. *d* With the landing of Columbus on his first voyage to America.

6. *a* The Mississippi. *b* The Ohio. *c* The Ottawa. *d* The Columbia.

7. *a* In the northern part of Norway and projects into the Arctic Ocean. *b* In the southern part of Ireland and projects into the Atlantic. *c* In the southern part of British India and projects into the Indian Ocean. *d* In the eastern part of Africa and projects into the Indian Ocean. *e* In the eastern part of Brazil and projects into the Atlantic Ocean.

8. *a* In Maryland, on Chesapeake Bay; the seat of the United States Naval

Academy. *b* In Massachusetts; noted for the manufacture of watches. *c* In Connecticut; seat of Yale College. *d* On the Island of Cuba; the greatest sugar market of the world. *e* In Minnesota; a great port for shipping grain.

9. Hudson River, Harlem River, Spuyten Duyvel, East River and New York Bay. *b* East River.

10. *a* Coffee, sugar, hides, indigo, rubber, fruits, woods, and tobacco. *b* Wine, silk, cork, wool, olive oil, fruits.

Physiology and Hygiene.

1. *a* The collar bone, at upper part of thorax. *b* An opening in the iris. *c* The wind pipe extending from the pharynx to the bronchi of the lungs.

2. *a* It is the cavity enclosed by the ribs, sternum, and the lumbar vertebrae, and extends from the base of the neck to the diaphragm. *b* It contains the heart, lungs, oesophagus, thoracic duct, nerve and blood vessels.

3. *a* By tendons or sinews. *b* By ligaments chiefly. Tendons and muscles also aid in holding them together. *c* Voluntary muscles.

4. *a* The pulmonary artery. *b* The aorta and the radical artery.

5. Proper use develops and strengthens the muscles. *b* Disuse causes them to become pale and flabby. *c* Misuse strains and ruptures them, and causes them to lose their power.

6. *a* Theine. *b* Caffeine. *c* Theobromine. *d* Nicotine. *e* Tobacco.

7. *a* The bronchi, bronchial tubes, and air cells. *b* Mucous membrane. *c* The membrane is arranged in folds in the air cells, so that an extensive surface is presented to facilitate the exchange of gases.

8. Having a great affinity for water, it absorbs moisture from the blood and shrivels the corpuscles.

9. Sneezing, coughing, laughing, sobbing, and hiccupping.

10. When eaten slowly, the saliva is thoroughly mixed with the bread and the starch of the bread is changed to sugar in the mouth.

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LESSON ON THE CAT.

BY BESSIE L. PUTNAM.



"Scientists class all animals that have a backbone as *vertebrates*. This will bring you and me in the same great division with the cat. Can you think of any other similarity?"

Class: (laughing) "No; we are not one bit like cats."

"Why not?"

"Cats have four feet."

"And are consequently *quadrupeds*, while man is a *biped*. Suppose that I change the form of this expression and ask how many *limbs* man has?"

"Four."

"One similarity found! Does the cat ever use its fore limbs for any other purpose than walking?"

"Yes, it picks up things with them; my kitten will toss and roll a ball all around the room."

(Let pupils name other animals using the fore paws for prehension. What bone gives them this power?)

"The ends of your fingers and toes are protected by a hard flat covering."

"The cat's toe-nails are round and long."

"They are round because the horny material is formed at the sides as well as upon the upper surface. Our nails are to protect the flesh; and on the fingers they enable us to pick up things readily. The cat also uses its nails as a means of defense."

(Compare the claws of the cat and dog, noting the retractile power of the former).

"When you wish to pass about very quietly how do you step?"

"We step on tiptoe."

"The cat always steps on its toes rather than on the sole of the foot, and is consequently classed as *digitigrade*." (Compare step of the dog, fox, raccoon, badger and bear). "It is still further enabled to move noiselessly by the soft pads or cushions on the soles of its feet. If a tame cat was placed far away from any house what would it be likely to eat."

"It would catch birds, mice, and other small animals."

"Then I infer that its food includes little from the vegetable world as found in the natural state. Flesh eating animals are called *carnivorous*. Have you noticed anything remarkable about the cat's teeth?"

"They are long and sharp."

"How about the back teeth?"

"They are sharp and pointed, too."

"And they are admirably fitted for cutting. Those who have made a study of animals could tell at once from the shape of those thirty sharp teeth, even if they had never before seen or heard of a cat, that its food was largely flesh." (Compare its teeth with those of the dog, horse and man). "Does it ever use them for any other purpose than eating?"

"It bites when we plague it."

"Which of the five senses does it lack?"

"Not one; it can see, hear, feel, taste and smell."

"Can it see as well as we can?"

"Yes; it can see at night as well as by day."

"And because it does most of its hunting by night it is said to be *nocturnal*. What is the shape of the pupil?"

"Sometimes it is nearly oval; again it is just a narrow slit."

"You will find that in a dark room it is oval, and that it contracts as the light becomes stronger. The pupils of your own eyes vary in the same way save that they dilate or contract uniformly on all sides, thus preserving the circular outline." (Compare the pupil of the cat, dog and horse).

"Can you suggest any special organ of feeling?"

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"O, I know; it is the whiskers; and a cat will not try to go through a hole that crowds them very much."

(Compare with the horns of the snail and the antennae of insects).

Subkingdom,	vertebrate, quadruped.
Habits,	carnivorous, nocturnal.
Step,	digitigrade.
Forelimbs,	for locomotion and prehension.
For defense,	{ claws, retractile.
Pupil,	{ teeth, trenchant.
	vertically oval, great contractive power.
Sense of Touch,	acute in whiskers.

THE teacher needs not only a thorough knowledge of details, but at the same time a sureness and ripeness of judgment enabling him or her to decide without delay important questions of discipline and management. Do we pay for such qualities? If not, how much time is wasted and what wrongs are perpetrated, what losses ensue.

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NATURE STUDIES

BY THE AUTHOR OF "PRESTON PAPERS."

THE WISH-TON-WISH.

1. Where is its home?
2. Why is it called a *rodent*?
3. What other animal does it closely resemble?
4. Of what is it really a species?
5. What is its familiar name?
6. Upon what does it live?
7. How has it received the advances of civilization?
8. What is its length?
9. Compare its head and tail with that of the squirrel.
10. Describe its home and manner of living, and affection for its home.
11. Why is it so difficult to secure a specimen?
12. Describe its "town-wells."
13. In what way do they damage the stockman's property?
14. Upon what does it live?

[NOTE.—Answers to all these questions can be found in Webster's Dictionary (Unabridged), and in the September number of *Our Animal Friends*. Price, 10 cents, or \$1.00 a year. Address the publisher of *Snap Shots*, 37 West 10th Street, New York. The entire article will furnish excellent material for a unified lesson.]

NOTES ON NATURE STUDY.

BY WILBUR S. JACKMAN, COOK COUNTY NORMAL SCHOOL.

PLANTS furnish some strong contrasts with animals, and many parallels. Unlike most animals, the trees, "rooted to the spot," must make, where they stand, whatever modifications are imposed by a changing environment. In the plant, as in the hibernating animal, the vital functions are reduced to the minimum; still further, the plant is divested of most of its living material so that the amount to be cared for is the least possible consistent with life and the perpetuation of existence. It is, therefore, as if the hibernating animal could not only almost entirely suspend the vital functions, but as if it could enormously reduce the

size it has during its period of greatest activity. The modes which the plant adopts in caring for the living parts during winter, and the places where life is retained should therefore be the subjects of study at this season.

In geography, the pupils may learn by a careful study of the weather maps to what extent the climate conditions of their own surroundings prevail in the country. This study may be so extended as to include other countries, and at last the world. The isotherms will be a guide as to temperature, and the tracks of the storm areas will indicate other conditions. After a snow storm, let the pupils, by drawing on the map a line through the bordering places where snow is reported, establish a "snow line."

In the same way the "frost line" for the country may be established, and as both it and the snow line advance southward week by week and month by month the influence upon life may be studied. A series of landscape pictures from north to south representing the same season would do much to enhance the study.

In the study of the lever the pupils should be allowed to begin with machinery at work. A little observation will reveal the essential thing in this case which is to see that the lever is but a means by which energy is directed and controlled, and that it is not a source of energy. The practical point to be observed is the relation of the amount of work done to the amount of power applied. This relationship bears a constant ratio to the proportions of the lever used. In all movements three elements are considered, viz., space, time and force. That machine is best which most accurately preserves that balance among these factors which the end sought requires. The relation of this study to that suggested under zoology in the outline is evident.

Ordinarily, pupils do not have a picture of heat as energy; i. e., something capable of doing work. A familiar phenomenon illustrating the point is that of the liquefaction of ice. Begin with the fact that the ice water running in the streets is as cold as ice. Prove this with the thermometer. That the ice is constantly receiving heat from the sun

may be inferred from the fact that it is continually melting and that other objects near by become warm. It is evident that the reduction of a solid to a liquid requires the expenditure of energy. Now, by the intervention of experiment, verify the inference and secure a quantitative result which will show, approximately, the amount of heat consumed in doing the work. For directions for this experiment examine any manual of physics, or "Nature Study," page 153. As a source of work-power, heat, then, becomes easily associated with energy expended in bodily and mechanical movements.

In meteorology a daily record of phenomena is essential, but it is only to the average of results covering a considerable period that much significance can be attached. The significance of a southwest wind cannot be understood by a single day's observation; but when the results for a week or month are tabulated they may (or may not) indicate some law. When tabulated for a season their significance in that period may appear. The significance may vary with the season. The naming of clouds is of no particular importance unless the meaning of the form be studied. A daily record of weather observations, if properly studied and interpreted within the compass of the pupils' understanding, is fundamentally important in almost every other branch of nature study.

During this month the center of interest in our celestial relations is in the solstice. Measure the slant of the sun's rays at noon by means of the shadow stick and brass protractor. In similar manner if possible determine how far south of west the sun sets. Compare the area covered by a given volume of sun light now with that covered a month

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or two ago. Compare the length of day (the period of heat radiation and absorption) with the length of night (the period of radiation only). The temperature of a place due primarily to astronomical conditions depends not only upon the slant of the sun's rays, but upon the relation that exists between the periods of radiation and absorption (daytime) and of radiation without absorption (night time).

Geography—Eighth Grade.

- AFRICA.**
- I. Position.
 1. Absolute:—
 - a. Latitude.
 - b. Longitude.
 2. Relative:—
 - a. Boundary.
 - II. Size.
 1. Comparative.
 2. Area.
 3. Length, Width.
 - III. Form.
 1. Coast Line.
 2. Draw Map.
 - IV. Natural Divisions.
 1. Northern Plateau.
 - a. Mountains: Atlas, Kong.
 - b. Plateaus: Atlas Highlands, Kong Highlands, Sahara, Nubia.
 - c. Waters: Coast Rivers, Lake Tchad.
 2. Southern Plateau.
 - a. Mountains: Cameroon, Blue, Crystal.
 - b. Plateaus: Interior, Abyssinia.
 - c. Lakes: Victoria, Albert, Tanganyika, Bangweolo, Nyassa.
 3. Border Plains.
 - a. Plains: Along the Coast; Along Courses of Rivers.
 - b. Waters: Nile, Niger, Orange, Zambesi, Senegal, Gambia, Gulf of Cotes, Gulf of Sidra, Cape Bon.
 - V. Coast.
 1. Northern.
 - a. Cape Sem.
 - b. Gulf of Aden, Sofala Bay, Mozambique Channel, Capes Guardafui, Agulhas.
 2. Eastern.
 - a. Gulf of Guinea, Bight of Biafra.
 - b. Capes: Good Hope, Frio, Verd, Blanco, Sparte.
 3. Western.
 - VI. Climate.
 1. Tropical Region: Location, Extent, Soil, Desert, and Fertile Region.
 2. Temperate Region: Position, Extent, Climate, Vegetation, Animals.
 - VII. People.
 1. Negroes: Where Found; Character, Occupation.
 2. Whites: Berbers, Arabs, Moors, Kaffirs, Hottentots, Pagan, Mohammedan, Christian.
 - VIII. Religion.
 - IX. Political Division.

Give special attention to Egypt and Southern Africa. Read or tell the school much about Livingstone, Stanley, General Gordon, etc.

NOTES.

The Congo River drains a territory nearly equal in size to that drained by the Mississippi. Its source, Lake Bang-

weolo, was discovered by Livingstone, the famous explorer. This river drains by far the most fertile region of Africa.

The Nile has its sources in Victoria Nyanza and Albert Nyanza, and after flowing about 4,000 miles empties into the Mediterranean through the two principal mouths of its delta at Rosetta and Damietta. For the last 1,200 miles it does not receive a single affluent.

The Niger flows for 2,600 miles in a winding course, and empties into the Gulf of Guinea. Its delta is 3,200 square miles in extent. This stream is from one to six miles wide and is navigable several hundred miles from its mouth.

Liberia is an American settlement of emancipated slaves, established in 1820 by the American Colonization Society. It is an independent republic.

The Suez Canal, ninety-two miles long, connects Port Said on the Mediterranean Sea with Suez on the Red Sea. It has a depth of twenty-six feet, with a general width of 200 to 300 feet at the top and 72 feet at the bottom. It takes a vessel about sixteen hours to go through the canal.

The ostrich, which has been often described as the feathered camel or the giraffe among birds, is found in almost every part of Africa, but its chief home is in the desert and open plains. It avoids mountainous districts, unless pressed by hunger. The large secretary-bird, which preys upon serpents and other reptiles, is one of the most remarkable of African birds. It is common in the South part and is often domesticated.

St. Helena is a huge dark mass of rock rising abruptly from the ocean to the height of 2,692 feet. Jamestown is the only town and port.

Spelling—Sixth Year.

DURING this month study the sounds represented by c, g, n, s and x, with the diacritical marks. Study also words pronounced alike, but spelled differently as

flea, fleæ.	heal, heæl.	flow, floe.
knead, need.	dear, deer.	berth, birth.
beach, beech.	feat, feet.	hoop, whoop.
beer, bier.	beat, beet.	quire, choir.
leaf, lief.	leak, leek.	nay, neigh.
meat, meet.	cell, sell.	hare, hair.
peace, piceæ.	lead, led.	lessen, lessen.
rest, wrest.	real, reel.	kill, kiln.

Give plenty of drill, forming words from prefixes. The prefix fore meaning before. As:

Foreground—the ground in the front.

Forecast—to tell before.

Foreclose—to shut up.

Foremast—the mast at the front.

Forerunner—the one who goes before.

Foresight—to see beforehand.

Foretaste.

Forethought.

Forewarn.

Spelling books are good when properly used, but the teacher should be above and beyond any spelling-book. Above all, avoid falling into the habit of saying, "Take the next lesson in the spelling-book." The spelling lesson needs thought and preparation as well as any other lesson. R.

Arithmetic—Eighth Year.

EXCHANGE.

This is a subject which many pupils in school do not understand, largely because they attempt to solve the problems, and do solve them by the rule, and when away from the text-book the rule is forgotten, and failure is the result.

We will suppose that A lives in Chicago and desires to pay a sum of money to B, who lives in New York. (Have one boy represent A and another B). He may do this in one of several ways.

1. He may send the money by express.

2. He may send it in a registered letter.

3. He may send a postal money order.

4. He may buy a bill of exchange.

In order to see how a system of exchange is built up between two cities, we will suppose A can find someone in Chicago to whom someone in New York owes an amount equal to the amount that A owes B. A can purchase of him an order on this New York creditor, and send it to B. B can receive his pay on presentation of this order.

Both debts are thus paid without sending money either way. The convenience of this method is apparent. Since it is not always possible to find a person in the relation supposed above, a banker in Chicago and another in New York arrange to pay orders that each may draw upon the other. All

that A has to do now is to purchase from his bank an order upon its New York "correspondent" and send it to B, who presents it and receives his pay. The New York bank may in turn sell orders upon the Chicago bank.

This in brief is the essence of the whole system, both of foreign and domestic exchange. These orders are called drafts or bills of exchange. Give the pupils a good form and have them write drafts until they become acquainted with it. It will add interest if you can show them a draft on some bank. I remember showing a draft in school, and quite a number would not believe that it would be accepted at the village store in payment for sugar and coffee.

1. What is the difference between a check and a draft?
2. What is the difference between a domestic and a foreign draft?
3. Why is it safer to send a \$5.00 draft than a \$5.00 bill?
4. What is a time draft?
5. Why should a time draft be cheaper than a sight draft for the same amount?
6. When will sight drafts be at a premium? When at a discount?
7. What is meant by arbitration of exchange?
8. What is circular exchange?

Illustration: A Louisville merchant has \$10,000 due him in Charleston. Exchange in Charleston is $\frac{1}{4}$ per cent. premium. Instead of drawing directly, he advises his debtor to remit to his agent in New York at $\frac{3}{8}$ per cent. premium, on whom he immediately draws at 12 days and sells the bill at $1\frac{1}{2}$ per cent. premium, interest off at 6 per cent. What would he receive in this way?

Suppose the Louisville merchant, who has \$10,000 to his credit in Charleston, had drawn a draft direct, and should sell it at $\frac{1}{4}$ per cent. premium, he would receive \$10,025 for it. But should he advise the debtor instead to invest the \$10,000 in New York Exchange, which in Charleston is at $\frac{3}{8}$ per cent. premium, the \$10,000 will buy a sight draft on New York for \$9,962.64. (Show how this is found). This draft is sent to the New York agent of the Louisville merchant. The credit is now transferred from Charleston to New York, where the merchant has a credit of \$9,962.64. He now draws a 12 day draft on

his agent for that amount, and at once sells it at $1\frac{1}{4}$ per cent. premium, less the bank discount for 15 days at 6 per cent. interest. The bank discount is $\frac{1}{4}$ per cent. off the face of the draft. The net premium then is $1\frac{1}{4}$ per cent.; he consequently receives for his draft 101 $\frac{1}{4}$ per cent. of \$9,962.64, or \$1,087.14, which is quite a gain over the first method.

HOUGHTON, MIFFLIN & Co. are advertising some splendid books for teachers and schools in this number. John Fiske's History of the United States is the best thing on that line published this year, and the Riverside Literature series is just what is needed in every school. Send for sample pages.

THE Central School Supply House of Chicago, Ill., have prepared a set of Politico-Relief Maps which are away ahead of anything we have seen before. As Dr. Harris well says, they are nineteenth century marvels. See their ad. and write for circulars.

THE STORY OF HELL AND HOW TO GET THERE, by That Englishman. The Harvard Company, Chicago, Ill.

Some truths are taught best in a back-handed way. In this case the author points very clearly the way to heaven, by showing how not to get there. Whether that Englishman is really English or not, he tells some very plain truths.

WE should like to see a few hundred thousand copies of every issue of *The Southern School* circulated in every State in the Union. *The Southern School* says good, plain things in a plain way, so short and sharp and crisp that they are apt to stick.

It is sad to see how many people seem to place no value on time; they talk so much about things which are not of any profit and interest to their listeners; they in meeting others upon matters of business, lack directness and seem to be unconscious of the loss to themselves and those with whom they are conversing.

"New leaves," "new resolutions," and such are as appropriate in the school room as anywhere, but be careful, do not undertake impossibilities because of the new year.



THE *New England Magazine* for January, 1895, with Burlington, Vermont, for its illustrated article, makes, as usual, a very attractive number. New Englander's scattered by the tens of thousands all over the west, find each issue of the *New England Magazine* almost as good as a visit of a month or six weeks at home. It has a choicetable of contents in addition to the editor's table also. Warren P. Kellogg, Publisher, 5 Park Square, Boston, Mass.

MR. SCOTT, the young, energetic, efficient President of the Century Co., takes the public into his confidence to a certain extent in his recent published statements as to the cost of certain parts of *The Century Magazine*. Mr. Scott indicates that the illustrations and the literary departments alone cost for each issue over \$10,000, and probably the typesetting, paper, press-work, binding, mailing and postage cost as much more, so that each individual purchaser and reader gets for 35 cents that which, if but one person bought a copy, would cost in the neighborhood of \$10,000. This illustrates the benefit of co-operation. We are all richer, because 250,000 persons read each issue of the *Century Magazine*, but if \$10,000 worth of flour, or beef, or pork, or coal is consumed, the \$10,000 is a non-existent factor in our civilization, but the \$10,000 worth of ideas is multiplied by as many times as there are people who read the *Century Magazine*, and we are all richer in intellect, in hope, and in all increments of mental, moral and spiritual power. These do not waste, but grow by being used. This is the value of mind over material productions. Think of securing for 35 cents that which, if produced for our individual benefit, would cost each one of us \$10,000! Think, too, of the value and wealth which comes to each of us by Christian co-operation along these and other similar lines. It is all for each now, and each for all. No, we would not have Mr. Scott cheapen either the matter or manner of the *Century Magazine*.

THE Victor Desk Calendar is one of the best we have seen this year. It is put up in a neatly mounted pad, has large space for writing and gives forth much wisdom in apt quotations. It will be mailed to anyone who sends in cents to the Overman Wheel Co., Chicopee Falls, Mass.

LAIRD & LEE, Chicago, Ill., have prepared a very fine calendar, which is out of the ordinary. The leaves are photographed from nature, with appropriate mottoes for each month. This will prove an acceptable reminder of the good wishes of the publishers.

THE Columbia Desk Calendar, which is issued annually by the Pope Manufacturing Co. of Boston, Mass., is out for 1895 much improved in appearance. It is a pad calendar, has a leaf for every day on which to jot down memoranda, and while it relieves the memory of much burden, it also brings to mind constantly the many virtues of the Columbia bicycle.

SOME important illustrated articles which will appear in early numbers of the *New England Magazine* for 1895, are, Old Milk Street, by Hamilton A. Hill; Round About Monadnock, by Dr. Edward Emerson; Horace Mann, by Frank A. Hill, Secretary of the Massachusetts Board of Education; Harriet Beecher Stowe, by George Willis Cooke; Sir William Peppereli and the Capture of Louisburg, Old New England Songs, Dartmouth College, The Harvard Annex, Lowell Mason, Raleigh's Lost Colony, The Part of Massachusetts Men in the Ordinance of 1787, The Boston Public Library, and New England in Chicago, by Edward Ishan. Many strong articles on social, political and educational subjects will be published in the coming year; and poetry and fiction will be well represented. Three dollars a year; twenty-five cents a number. Sample free to any address. Warren F. Kellogg, Publisher, Boston.

Send your orders direct to this office, 208 Vine St., St. Louis, and we will give the AMERICAN JOURNAL OF EDUCATION and the above magazine, both for \$3.25.

THE Christmas number of *The Century Magazine* is a splendid production in both matter and illustration, barring,

of course, the 30 pages devoted to Napoleon Bonaparte. We have drifted far enough in both time and space from him and his career to see that he was rather and only a moral monstrosity than a model hero; but "A Christmas Guest" and "How to the Singer Comes the Song," by the editor, R. W. Gilder, with all the other choice material given, makes their December issue one of the best ever issued. The Century Co., Union Square, New York City.

The St. Nicholas.—The little ones who read *St. Nicholas* will find that the year begins promisingly for them. The January number of the favorite magazine is full of holiday flavor, and there are sketches and stories to suit every taste. C. F. Holder tells all about "Rogue Elephants," and describes the exciting scenes that attended the killing of some of the most famous of them. A frontier story is "Tim Sheridan and His Christmas Goose," by Leonard M. Prince, U. S. A. The hero is a brave young boy who succeeds not only in winning a rare Christmas dinner, but in saving the life of an officer with whom he was hunting. "The Cherry-colored Purse," is a true story by Susan Fenimore Cooper, showing how a little girl managed to buy eleven Christmas presents with her eleven pennies. "A Piping Pie," by Rudolph F. Bunner, and "Who Seeks, Finds," by Judith Ray, are two fantastic stories. A new serial, intended especially for girls, is begun. It is called "Three Freshmen: Ruth, Fran and Nathalie," and is written by Jessie M. Anderson. It is a bright and lively account of girl life at Smith College. The other serials, which are continued by interesting installments are, "A Boy of the First Empire," by Elbridge S. Brooks; "Chris and the Wonderful Lamp," by Albert Stearns, and Jack Ballister's Fortunes," by Howard Pyle. There are poems in the number by Helen Gray Cone, Dorothea Lummis, Frederick Oppen, Tudor Jenks, and Mrs. Mary Mapes Dodge.

MESSRS. HOUGHTON, MIFFLIN & Co., of Boston, New York and Chicago, have recently published as Number 68 of their Riverside Literature Series paper 15 cents) Oliver Goldsmith's "The Deserted Village, The Traveller, and other poems." This edition, which has been prepared especially for use in schools, contains a biographical sketch, explanatory notes, and several pages of

some of the best known familiar quotations from Goldsmith's writing. No boy or girl should be allowed to leave the grammar school without an acquaintance with Goldsmith.

G. P. PUTNAM'S SONS have begun the publication of a serial to be entitled "Little Journeys." The series is published in monthly numbers, tastefully printed, and each number will contain a description of a recent visit made by Mr. Elbert Hubbard to the homes and haunts of some well-known author. The first number describes a visit to the home of George Eliot. It is a neat and interesting little pamphlet.

THE *Arena* opens the new year in its Jan. issue with a bill of fare that shows no falling off in the skill with which various interests are always combined within the covers of this well-edited magazine. The number is especially likely to attract wide attention on account of the publication of a remarkable symposium on the Age of Consent Laws in the United States, in which eight of the leading writers whose names are connected with the movement for Social Purity are represented. They are Aaron M. Powell, the editor of *The Philanthropist*, Helen H. Gardener, Francis E. Willard, Rev. A. H. Lewis, D. D., Dr. O. Edward Janney, M. D., Will Allen Dromgoole, the story writer of Tennessee life, and Dr. Emily Blackwell, of New York. Rev. W. H. Savage contributes to the popular series on The Religion of the Poets, interesting paper on "The Religion of Longfellow's Poetry." All together this is a very fine number.

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KORADINE, by Alice B. Stockham, M. D., and Lida Hood Talbot. Alice B. Stockham & Co., Chicago, Ill. Price, \$1.25.

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EXCELL'S SCHOOL SONGS, E. O. Excell, Chicago.

Many teachers who have learned to know and love E. O. Excell's songs, in the Sunday-school and young people's

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A School Manual of Civil Government, for grammar schools, by M. L. and G. Guillaume Thummel, 4035 Morgan St., St. Louis. Mrs. Thummel, in this manual, has succeeded admirably in putting the Constitution into a form that even our boy says he can understand. As a reference book and in the class room it is very helpful.

A FROGLAND WEDDING. Illustrated by Roy Conger. Laird & Lee, Publishers, Chicago.

This happy conception of Mr. Conger's of "The frog who would a-wooing go," is one that greatly pleases the children. Such comic, pathetic, intelligent expressions! Frogs laughing, marching, dancing, skating, riding in a shell-boat, &c. The music for singing the story, by Helen Hitchcock, makes it still more enjoyable.

WAYMARKS FOR TEACHERS, by Sarah L. Arnold, supervisor of primary schools, Minneapolis, Minn., 12 mo., 276 pp. Introductory price, \$1.25. Silver, Burdett & Company, Boston, New York, Chicago, Philadelphia.

Waymarks is one of the most inspiring, stimulating, and helpful books for teachers that has been issued for many a day. It is full of vitalized thought, and of what is still better for practical use—successful, everyday experience. Among the subjects discussed are Nature Study, which includes lessons on plant forms and animal habits and characteristics; Language Lessons from pictures, poems, and stories; reading, spelling, geography, number, seat work, and Talks on School Subjects, one of the most valuable chapters in the book, full of wide-awake and progressive ideas on Moods and Manners, Monday Mornings, the Schoolroom Atmosphere, the Discipline of the Schoolroom, etc.

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SYSTEMATIC SCIENCE TEACHING, by Edward Gardiner Howe.

This is volume 27 of the International Education Series, edited by W. T. Harris, A. M., L. L. D. It is, as the name implies, systematic in its treatment of the sciences. The work is thoroughly graded and outlined showing the work of each year, the relation of the different steps to each, and brief suggestions as to how science is related to other work. With this book in the hands of a live teacher science work can be systematically taught in any school. D. Appleton & Company, New York and Chicago, are the publishers, and we are glad they are pushing this work.

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WE will say nothing about our new dress and new form this month, they speak for themselves. How do you like it?

By the way just a word about sending money. We get money orders day after day and no letter to tell where they come from, and we are compelled to write to the postmaster and ask him who sent the order. Please remember that although you sign your name on the application blank, it does not appear on the money order.

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I like your journal very much and I shall recommend it to all my teachers and insist on their taking it. Many take it already.

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I have read with pleasure the AMERICAN JOURNAL OF EDUCATION. Your Christmas number is certainly an excellent paper, and in the interest of Education this office wishes you every success.

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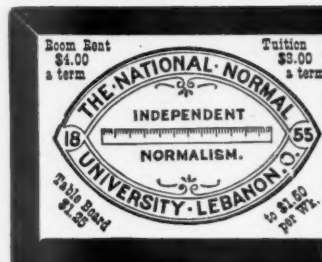
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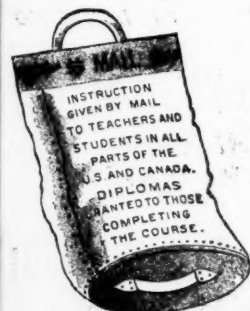
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